

PB# 87-46

Silver Stream Village

32-2-13

SILVER STREAM VILLAGE 87-46
Addition to mobile home site
Lester Clark

General Receipt 10807

TOWN OF NEW WINDSOR
555 Union Avenue
New Windsor, N. Y. 12550

Received of Silver Stream Inc. Aug. 11 19 89
\$ 314.00

Three Hundred Fourteen and 00/100 DOLLARS

For P/B. Fee \$100.00 Engineering Fee \$214.00

DISTRIBUTION 87-46

FUND	CODE	AMOUNT
<u>Check # 314.00</u>		
<u>#2641</u>		

By Pauline H. Townsend
Town Clerk
Title

Williamson Law Book Co., Rochester, N. Y. 14609

General Receipt 9056

TOWN OF NEW WINDSOR
555 Union Avenue
New Windsor, N. Y. 12550

Received of Silver Stream Inc. June 24 19 87
\$ 25.00

Twenty Five and 00/100 DOLLARS

For Site Plan Application 87-46

DISTRIBUTION

FUND	CODE	AMOUNT
<u>CP# 1956</u>		<u>25.00</u>

By Pauline H. Townsend
Town Clerk
Title

Williamson Law Book Co., Rochester, N. Y. 14609

BI
PPENG
FINE
H-o
SOWEN
H-yway

ORANGE COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

These plans are for Specs for waterline ext to serve

7-lot expansion, Silver Stream T.P.,
T. New Windsor

are hereby approved pursuant to Part 1 of the New York State Sanitary Code
subject to the provisions of the certificate of approval issued this date.

ASSISTANT COMMISSIONER

May 4, 1989

[Signature]

TECHNICAL SPECIFICATIONS

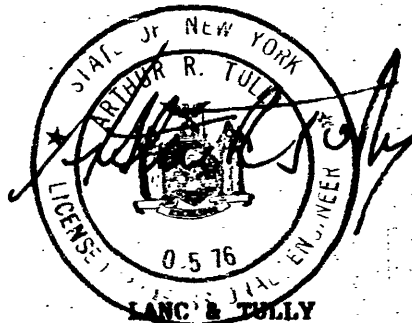
EXTENSION OF WATER DISTRIBUTION SYSTEM

TO SERVE

7-LOT EXPANSION
SILVER STREAM VILLAGE
MOBILE HOME PARK

TOWN OF NEW WINDSOR

ORANGE COUNTY, NEW YORK



LANC & TULLY
ENGINEERING AND SURVEYING, P.C.
GOSHEN, NEW YORK

FEBRUARY 1989

TABLE OF CONTENTS

DIVISIONS

- 1. Work Embraced and Scope of Project**
- 2. Specifications for the Installation of Water Lines**

2. _SPECIFICATIONS FOR THE INSTALLATION OF WATER LINES _

Index

2.01 _Water Pipe and Fittings _

- A. Pipe**
- B. Cast Iron Fitting**
- C. Gate Valves and Valve Boxes**
- D. Hydrants**

2.02 _Excavation and Pipe Installation _

- A. Trenches**
- B. Bedding**
- C. Laying Pipe**
- D. Backfilling**

2.03 _Thrust Blocks _

2.04 _Water Main & Sewer Crossings & Separation _

2.05 _Service Connection and Taps _

2.06 _Inspection and Testing _

2.07 _Disinfection of Mains _

- A. Preventive Measures During Construction**
- B. Preliminary Flushing**
- C. Form of Chlorine for Disinfection**
- D. Application**
- E. Methods of Chlorine Application**
- F. Final Flushing**
- G. Bacteriologic Tests**
- H. Repetition of Procedures**
- I. Procedures after Cutting or Repairing Existing Mains**

1. WORK EMBRACED AND SCOPE OF PROJECT

The work involved in the project consists of the installation of water mains, valves and appurtenances which will extend the existing water distribution system of the 130 lot Silver Stream Village Mobile Home Park to serve the proposed 7-lot expansion in the Town of New Windsor. Approximately 740 feet of 2" water main with appurtenances will be installed in the proposed Post Road. The proposed water mains will be connected to the existing 2" water main at the proposed Post Road and between the existing mobile home units #2 and #3 as shown on the plans.

The work on this project will also include any pavement and shoulder, curb and sidewalk removal, excavation, bracing and support of adjoining ground or structures where necessary, handling all drainage and ground water conditions, the protection from damage to existing lines, or other services or structures, traffic maintenance and safety, guarding the site, unload, haul, distribute, laying pipes, cleaning up site, testing the water lines for pressure and leakage, disinfection of water lines, and maintenance of the streets and other surfaces over the trenches and replacement of pavement and shoulders of roads, parking areas and driveways, where required.

Contractor shall provide all labor, materials, equipment and services for the complete site preparation, excavation, installation, backfilling and restoration of all work as shown on the drawings and specified herein. During construction, local and through traffic must be maintained. Special care must be taken to avoid damaging the existing utilities. In the event that existing utilities are broken, repairs must be made immediately and be acceptable to the Engineer.

2. SPECIFICATIONS FOR THE INSTALLATION OF WATER LINES

The Contractor shall supply all labor, tools, materials, and equipment to construct, test and disinfect the water mains as described in these specifications and the accompanying drawings. All references to the standards, specifications, regulations, etc., are meant to be their last revisions.

2.01 Water Pipe and Fittings

All pipe and fittings shall conform to the sizes shown on the drawings and shall be Ductil iron or other materials, subject to Engineer's approval.

A. Pipe

a. Ductile Iron Pipe

Ductile iron pipe shall be Class 52 and shall conform to ANSI Standard A21.51 (AWWA C-151). Each pipe shall be tested at a hydrostatic pressure of not less than 500 psi as detailed in ANSI Standard A 21.51. Cement linings shall be in accordance with ANSI A21.4 (AWWA C-104). Joints employing a single elongated grooved gasket to effect the joint seal, such as U.S. Pipe and Foundry "Tyton" type or approved equal, will be acceptable. Bituminous coating inside and outside of pipe shall conform to ANSI A21.8 (AWWA C-108).

B. Cast Iron Fittings

Cast iron fittings shall conform to the ANSI Specifications 21.10 or AWWA Standard C-110. The fittings shall be cement lined in accordance with ANSI Specifications A21.4 (AWWA C-104). Joints shall be mechanical joints unless specified otherwise and shall conform to the applicable requirements of ANSI A21.11 (AWWA C-111).

C. Gate Valves and Valve Boxes

All gate valves shall meet the requirements of AWWA Standards C-509. They shall be iron body, bronze mounted, resilient seat, wedge disc, mechanical joint gate valves with nonrising stems, "O" ring type packing and standard 2" operating nuts. All gates shall open to the left, shall be of Mueller or approved equal, proportioned for working pressures of 200 psi hydrostatically tested at 400 psi shell. Each valve shall be provided with a cast iron telescoping valve box and cover installed by the Contractor. The Contractor shall provide anchor blocks and/or clamps as directed by the Engineer for the gate valves. The valve boxes shall be 5-1/4" diameter, 2 or 3 piece, sliding type, Mueller figure H10364, or approved equal. The valve boxes shall be adequate for the trench depth so that when set on the valve, the cover is level with the pavement or the completed surrounding ground, whichever is applicable. The valve box cover shall have the word "WATER" cast in top.

D. Hydrants

All hydrants shall conform to AWWA Specification C-502 with a working pressure of 150 psi and shall be of a break-flange traffic construction type Kennedy Guardian or Mueller Centurion. The hydrant shall have the operating nut pentagon shaped, measuring 1" from the point to flat, opening counterclockwise. Two 2-1/2" hose and one 4-1/2" pumper nozzle shall have the National Standard threads and shall be covered with nut type caps and chains. Size of nuts shall be the same as the operating nut.

The hydrant shall have the bottom valve size at least 5-1/4", with bronze seat ring and shall have a minimum of 6" inlet opening with mechanical joint connection for a pipe to an auxiliary gate valve. The auxiliary gate valve shall be at least 6" in size with a valve box and cover.

The depth of bury for hydrant shall be 5' unless greater depth is needed due to the ground elevation or the depth of the pipe. Graded gravel shall be placed around the lower part of the hydrant for drainage purposes. The hydrant shall be installed as specified in Section 3.7 of AWWA Standard C-600 and/or as shown in the hydrant details of other applicable specifications. The hydrant shall be painted bright red or other colors as may be specified by the Owner. Hydrants shall be UL or FM approved, where required.

2.02 Excavation and Pipe Installation

A. Trenches

Excavation and preparation of trench shall be in accordance with AWWA C-600 as applicable. The contractor shall provide all sheeting, shoring and bracing which may be needed, and shall keep the trench free from water. Every reasonable effort should be made to keep the width of the trench at a point level with the top of the pipe, no greater than 30" for a 6" pipe, 32" for 8" pipe, 34" for 10" pipe, and 36" for 12" pipe. The trench width in rock or among boulders shall be sufficient to leave at least 6" of clearance between the pipe and any rock or boulder. Excavation in plain earth shall not ordinarily be carried below the bottom of the pipe; but rock shall be excavated to a depth of at least 6" below the pipe. If excavation is carried below the pipe bottom for any reason, a backfill of sand, or soft dry earth, free of stone, shall be used to restore the trench to its proper depth. This material will be thoroughly compacted and then shaped to fit the pipe.

B. Bedding

For ductile cast iron and cast iron pipe, bedding shall be Type 2, consisting of flat-bottom trenches, with bellholes dug before laying pipe and with backfill tamped.

C. Laying Pipe

All cast iron pipes shall be laid in accordance with AWWA Standard C-600. All pipes, fittings and valves shall be carefully handled to avoid damage, and while they are suspended over the trench, before lowering, they shall be rung and inspected for defects. Before the pipe is laid, all lumps, blisters, excess coal tar, dirt, oil, grease and moisture shall be removed from inside the pipe. After pipe is laid, care shall be taken to avoid the entrance of dirt or water from the trench by use of tight bulkheads. The handling of material shall conform to Section 2.2 of AWWA Standard C-600.

The pipe shall be laid to conform to lines and grades shown on the plans, or as directed by the Engineer. The pipe shall have a minimum cover of 4.5' unless noted otherwise on the drawings. Each bell and spigot shall be cleaned with a wire brush. Each pipe and special fitting shall be firmly supported on good foundations. Mechanical and rubber gasket pipe joints shall be made in strict accordance with manufacturer's instructions. Where bolts are used, they shall be drawn up evenly with a torque wrench.

D. Backfilling (General)

All pipes, connection, intersections, branches, valves and ends of pipes shall remain uncovered until the Engineer has inspected and measured and located same and given permission to backfill the trenches. After laying and inspecting the pipe, each length shall be carefully backfilled by placing approved material, (sand, gravel, loose earth, etc.), free from stone, around the pipe. Backfill shall be thoroughly compacted and tamped in 6" layers so as to securely hold the pipe in place, but not tampered to cause movement of the pipe. This careful placing shall continue until a minimum of 1' of earth has been placed and tamped over the top of the pipe. No stones larger than 2" shall be placed in the tamped portion of the backfill. From 1' above the pipe to the grade shown on the drawings for fixed by the Engineer, the trench shall be backfilled with suitable material that shall contain no stone larger than 1/2 cubic foot and shall be carefully placed and compacted. Backfill under permanent pavement, curbs, driveways, or sidewalks shall be made with sand, run-of-bank gravel or other approved materials, and shall conform to AWWA Standard C-600, Section 3.5. Removal, restoration and maintenance of surface shall be made in accordance with AWWA Standard C-600, Section 3.2.

E. Gravel Used in Backfilling

The gravel shall consist of natural or artificial mixture of hard, durable pebbles, rock fragments and soil binder, free from soft particles and excess clay, and shall conform to the following gradation:

<u>Sieve Size</u>	<u>% of Weight Passing</u>
2"	100%
1/4"	25-60%
200	0-10%

This material shall be placed in maximum 12" uniform layers without segregation and thoroughly compacted by means of mechanical tampers designed for the job.

The trench surface shall be brought to a level even with the adjacent pavement. The surface of the trench must be kept level with the adjacent pavement by the addition of material until it is ready for permanent restoration.

2.03 Thrust Blocks

Concrete reaction or thrust blocks and/or clamps shall be placed behind all bends, tees, caps and plugs or other fittings and as directed by the Engineer. Concrete shall have a 28 day compressive strength of 2500 psi. Excavation for same shall be carried out by hand at such locations to provide a good bearing against undisturbed materials within a short distance from the pipe or fittings. The thrust blocks shall be of the dimensions shown on the drawings or as determined by the Engineer.

2.04 Water Main & Sewer Crossings & Separations

Separate water and sewer lines at least 10' horizontally (measured edge to edge).

At street intersections, or at other locations where water and sewer lines must cross, including sanitary sewer laterals and house connection potable water services, provide a minimum vertical distance of 18" between the outside of the water main and the outside of the sewer.

One full length of water pipe shall be centered on sewer crossings so joints are equidistant and as far as possible from the sewer. Provide adequate support for both pipes to eliminate any possibility of settling.

When it is impossible to obtain proper separation as stipulated above, that deviation from required minimum separation distances must be approved by the Orange County Health Department.

2.05 Service Connections and Taps

The size of Service Connections will be determined during site plan design for the specific user and demand. The individual user will utilize tapping sleeves and valves installed as described in the following section.

Wet Tapping Into Existing Mains

Tapping sleeves and valves shall be furnished and installed at the locations shown on the plans. Each connection to an existing water main shall be made under pressure with no loss of water or interruption of flow in main. Tapping sleeve and valve shall be equal to those manufactured by Mueller Co., (mechanical joints) or approved equal, and shall be installed as per manufacturer's recommendations, be workmen skilled in this type of work. Valve box shall be provided with the valve.

2.06 Inspection & Testing

The Contractor shall supply all necessary materials, equipment and labor to test the piping as described below, including pump, piping, valves and labor. The Engineer will supply the test gauge or else calibrate the Contractor's gauge before and after the tests. All pressure tests must be done in the Engineer's presence under his direction. The testing of water mains shall be done in accordance with AWWA Standards C-600.

Two tests are required. The first, shall be a hydrostatic pressure test only. This shall be done when a section of line has been completed and concrete thrust blocks have set up sufficiently. The line shall be partially backfilled or braced against movement during the test. All air must be bled out of the section to be tested. If necessary, the Contractor shall install corporation stops at the high points, for blow-offs. The hydrostatic test shall be of at least two hour duration. Test pressure shall be as indicated by the Engineer, and in general, shall be done one and a half times the actual working pressure applied at the lowest point of the section to be tested. A correction shall be made for the difference in elevation between this point and the test gauge. The pressure in the line shall not vary by more than ± 5 psi for the duration of the test. With the required pressure on the line, the entire run shall be examined for evidence of leakage. Any leaks discovered shall be corrected and the test repeated.

A leakage test of two hour duration shall be conducted concurrently with the pressure test. No pipe installation will be accepted unless and until the leakage is less than the amounts allowed in AWWA Specifications C-600, Section 4.2, Table 6. Allowable leakage is determined by the following formula:

$$L = \frac{SD(P)^{\frac{1}{2}}}{133,200}$$

where L is leakage in gph, S is the length of pipe tested in feet, D is the nominal diameter of the pipe in inches and P is the average test pressure during the test in psi. Allowable leakage is approximately 11.65 U.S. gallons per 24 hours per mile per inch nominal diameter of pipe at a pressure of 150 psi.

When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gal/h/in. of nominal valve size shall be allowed.

All visible leaks are to be repaired regardless of the amount of leakage.

2.07 Disinfection of Mains

All new work shall be disinfected by the Contractor. Disinfection shall be performed in an approved manner in accordance with the American Water Works Association's Standard for Disinfecting Water Mains, Designation C-651, except that the tablet method described in Section 5.1 of C-651 shall not be used.

A. Preventive Measures During Construction

Keeping Pipe Clean and Dry: Precautions shall be taken to protect pipe interiors, fittings and valves against contamination. Pipe delivered for construction shall be strung so as to minimize entrance of foreign material. When pipelaying is not in progress, as, for example, at the close of the day's work, all openings in the pipeline shall be closed by water tight plugs. Joints of all pipe in the trench shall be completed before work is stopped. If water accumulates in the trench, the plugs shall remain in place until the trench is dry.

If dirt that, in the opinion of the Engineer or job superintendent, will not be removed by the flushing operation enters the pipe, the interior of the pipe shall be cleaned and swabbed as necessary, with a 5 percent hypochlorite disinfecting solution.

B. Preliminary Flushing

The main shall be flushed prior to disinfection.

The flushing velocity shall not be less than 2.5 ft/sec. The rate of flow required to produce this velocity in various diameters is shown in Table I. No site for flushing should be chosen unless it has been determined that drainage is adequate.

TABLE I

Required Openings to Flush Pipelines*
(40 psi Residual Pressure)

Pipe Size (in.)	Flow Required To Produce 2.5 fps Velocity (gpm)	Orifice Size (in.)	Hydrant Outlet Nozzles Number	Size (in.)
4	100	15/16	1	2 - 1/2
6	220	1-3/8	1	2 - 1/2
8	390	1-7/8	1	2 - 1/2
10	610	2-5/16	1	2 - 1/2
12	880	2-13/16	1	2 - 1/2
14	1,200	3-1/4	2	2 - 1/2
16	1,565	3-5/8	2	2 - 1/2
18	1,980	4-3/16	2	2 - 1/2

* With 40 psi residual pressure, a 2-1/2 in. hydrant outlet nozzle with discharge approximately 1,000 gpm and a 4-1/2 in. hydrant nozzle will discharge approximately 2,500 gpm.

C. Form of Chlorine for Disinfection

The most common form of chlorine used in the disinfecting solutions is liquid chlorine (gas at atmospheric pressure), calcium hypochlorite granules, and sodium hypochlorite solutions.

1. Liquid Chlorine

Liquid chlorine shall be used only when suitable equipment is available and only under the direct supervision of a person familiar with the physiological, chemical and physical properties of this element and who is properly trained and equipped to handle any emergency that may arise. Introduction of chlorine-gas directly from the supply cylinder is unsafe and shall not be permitted.

The preferred equipment consists of a solution feed chlorinator in combination with a booster pump for injecting the chlorine-gas water mixture into the main to be disinfected. Direct feed chlorinators are not recommended because their use is limited to situations where the water pressure is lower than the chlorine cylinder pressure.

2. Calcium Hypochlorite

Calcium hypochlorite contains 70 percent available chlorine by weight. It is either granular or tabular in form. The tablets, 6-9 to the ounce, are designed to dissolve slowly in water.

A chlorine-water solution is prepared by dissolving the granules in water in the proportion requisite for the desired concentration.

3. Sodium Hypochlorite

Sodium hypochlorite is supplied in strengths from 5.25 to 16 percent available chlorine. It is packaged in liquid form in glass, rubber, or plastic containers ranging in size from one quart bottles to five gallon carboys. It may also be purchased in bulk for delivery by tank truck.

The chlorine-water solution is prepared by adding hypochlorite to water. Product deterioration must be reckoned with in computing the quantity of sodium hypochlorite required for the desired concentration.

D. Application

The hypochlorite solutions shall be applied to the water main with a gasoline or electrically powered chemical feed pump designed for feeding the chlorine solutions. For small applications, the solutions may be fed with a hand pump, for example, a hydraulic test pump.

Feed lines shall be of such material and strength as to withstand safely the maximum pressures that may be created by the pumps. All connections shall be checked for tightness before the hypochlorite solution is applied to the main.

E. Methods of Chlorine Application

1. Continuous Feed Method

This method is suitable for general application. Water from the existing distribution system or other approved sources of supply shall be made to flow at a constant, measured rate into the newly-laid pipeline. At a point not more than 10 feet downstream from the beginning of the new main, the water entering the new main shall receive a dose of chlorine, also fed at a constant, measured rate. The two rates shall be proportioned so that the chlorine concentration in the water in the pipe is maintained at a minimum of 25 mg/l available chlorine. To assure that this concentration is maintained, the chlorine residual should be measured at regular intervals in accordance with the procedures described in the current edition of Standard Methods of AWWA M12 - Simplified for Water Examination.

Table II gives the amount of chlorine residual required for each 100 ft. of pipe in various diameters. Solutions of one percent chlorine may be prepared with sodium hypochlorite or calcium hypochlorite. The latter solution required approximately 1 lb. of calcium hypochlorite in 8.5 gallons of water. If liquid laundry bleach with 5.25% Cl is used, then 4.25 gallons of water is to be mixed with 1 gallon of bleach to obtain 1 percent solution.

TABLE II

**Chlorine Required to Produce 25 mg/l
Concentration in 100 ft. of pipe**

<u>Pipe Size (in.)</u>	<u>Volume of 100-ft. length (gallons)</u>	<u>100 Percent Chlorine (lb.)</u>	<u>1 Percent Chlorine Solutions (gal.)</u>
4	65.3	.013	0.16
6	146.5	.030	0.36
8	261.0	.054	0.65
10	408.0	.085	1.02
12	588.7	.120	1.44

During the application of the chlorine, valves shall be manipulated to prevent the treatment dosage from flowing back into the line supplying the water. Chlorine application shall not cease until the entire main is filled with the chlorine solution. The chlorinated water shall be retained in the main for at least 24 hours, during which time all valves and hydrants in the section shall be operated in order to disinfect the appurtenances. At the end of this 24 hour period, the treated water shall contain no less than 10 mg/l chlorine throughout the length of the main.

2. Slug Method

This method is suitable for use with mains of large diameter for which, because of the volumes of water involved, the continuous feed method is not practical.

Water from the existing distribution system or other approved source of supply shall be made to flow at a constant, measured rate into the newly laid pipeline. The water shall receive a dose of chlorine, also fed at a constant, measured rate. The two rates shall be proportioned so that the concentration in the water entering the pipeline is maintained at no less than 100 mg/l. The chlorine shall be applied continuously and for a sufficient period to develop a solid column of "slug" of chlorinated water that will as it passes along the line, expose all interior surfaces to a concentration of at least 100 mg/l for at least 3 hours. The application shall be checked at a tap near the upstream end of the line by chlorine residual measurements made according to the procedures described above.

As the chlorinated water flows past tees and crosses, related valves and hydrants shall be operated so as to disinfect appurtenances.

3. Tablet Method

The "tablet method" as contained in American Water Works Association Standard C-651 is not acceptable to the New York State Department of Health and shall not be used.

F. Final Flushing

After the applicable retention period, the heavily chlorinated water shall be flushed from the main until the chlorine concentration in the water leaving the main is no higher than that generally prevailing in the system, or less than 1 mg/l. Chlorine residual determination shall be made to ascertain that the heavily chlorinated water has been removed from the pipeline.

G. Bacteriologic Tests

After final flushing and before water main is placed in service, a sample or samples shall be collected from the end of the line and tested for bacteriologic quality and shall show the absence of coliform organisms. If the number and frequency of samples is not prescribed by the public health authority having jurisdiction, at least one sample shall be collected from chlorinated supplies where a chlorine residual is maintained throughout the new main. From unchlorinated supplies at least two samples shall be collected at least 24 hours apart.

In the case of extremely long mains it is desirable that samples be collected the length of the line as well as at its end.

Samples for bacteriologic analysis shall be collected in sterile bottles treated with sodium thiosulphate. No hose or fire hydrant shall be used in collection of samples. A suggested samples tap consists of a standard corporation cock installed in the main with a copper tube gooseneck assembly. After samples have been collected, the gooseneck assembly may be removed, and retained for future use.

H. Repetition of Procedure

If the initial disinfection fails to produce satisfactory samples, disinfection shall be repeated until satisfactory samples have been obtained. When the samples are satisfactory, the main may be placed in service.

I. Procedure After Cutting into or Repairing Existing Mains

The procedures outlined in this section apply primarily when mains are wholly or partially dewatered. Leaks or breaks that are repaired with clamping devices while the mains remain full of water under pressure require no disinfection.

1. Trench Treatment

When an old line is opened, either by accident or by design, the excavation will likely be wet and badly contaminated from nearby sewers. Liberal quantities of hypochlorite applied to open trench areas will lessen the danger from such pollution. Tablets have the advantage in such a situation because they dissolve slowly and continue to release hypochlorite as water is pumped from the excavation.

2. Main Disinfection

a. **Swabbing and Flushing:** The following procedure is considered as a minimum that may be used.

Swabbing with Hypochlorite Solution: The interior of all pipe and fittings used in making the repair (particularly couplings and tapping sleeves) shall be swabbed with a 1 percent hypochlorite solution before they are installed.

Flushing: Thorough flushing is the most practical means of removing contamination introduced during repairs. If valving and hydrant locations permit, flushing from both directions is recommended. Flushing shall be started as soon as the repairs are completed and continued until discolored water is eliminated.

b. Slug Method

Where practicable, in addition to the procedures of swabbing and flushing, a section of main in which the break is located shall be isolated, all service connections shut off, and the section flushed and chlorinated as described, except that the dose may be increased to as much as 300 mg/l, and the contact time reduced to as little as 1/4 hour. After chlorination, flushing shall be resumed and continued until discolored water is eliminated.

3. Sampling

Bacteriologic samples shall be taken after repairs to provide a record by which the effectiveness of the procedures used can be determined. If the direction of flow is unknown, samples shall be taken on each side of the main break.



Department of Health

LOUIS HEIMBACH
County Executive

SALLY FAITH DORFMAN, M.D., M.S.H.S.A.
Commissioner of Health

May 4, 1989

Silver Stream T.P.
c/o Lester Clark
614 Little Britain Rd.
New Windsor, NY 12550

Re:
Approval of plans &
specifications for:
Waterline Ext. to serve
7-Lot Expansion,
Silver Stream T.P.
T. New Windsor

Dear Sir:

We have this day approved the plans and specifications submitted by Lanc & Tully, P.C., for the above mentioned project.

Application for this project was duly made by you and received in this office on February 16, 1989.

We are enclosing a Certificate of Approval. A copy of the approved plans and specifications is being retained in our files and the remaining sets are being returned to your engineer.

Very truly yours,


M.J. Schleifer, P.E.
Assistant Commissioner

MJS/aje

cc: Engineer
O.C. Planning Dept.
File

enc.

GENERAL

6. Type of Ownership:			
<input type="checkbox"/> Municipal	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> 68 Private - Other	<input type="checkbox"/> 1 Authority
<input type="checkbox"/> Industrial	<input type="checkbox"/> 9 Water Works Corp.	<input type="checkbox"/> Private - Institutional	<input type="checkbox"/> 19 Federal
		<input type="checkbox"/> 26 Board of Education	<input type="checkbox"/> 20 State
			<input type="checkbox"/> 30 Interstate
			<input type="checkbox"/> 40 International
			<input type="checkbox"/> 18 Indian Reservation
7. Estimated Total Cost	8. Population Served	9. Drainage Basin	
\$26,000	+28 additional	Hudson River	
10. Federal Aid Involved?		11. WSA Project?	
<input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No		<input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No	

SOURCE N/A

12.		13. Est. Source Development Cost
<input type="checkbox"/> Surface	Name _____ Class _____	
<input type="checkbox"/> Ground	Name _____ Class _____	
14. Safe yield:	15. Description:	
GPD		

TREATMENT N/A

16. Type of Treatment			
<input type="checkbox"/> 1 Aeration	<input type="checkbox"/> 5 Clarifiers	<input type="checkbox"/> 9 Fluoridation	
<input type="checkbox"/> 2 Microstrainers	<input type="checkbox"/> 6 Filtration	<input type="checkbox"/> 10 Softening	
<input type="checkbox"/> 3 Mixing	<input type="checkbox"/> 7 Iron Removal	<input type="checkbox"/> 11 Corrosion Control	
<input type="checkbox"/> 4 Sedimentation	<input type="checkbox"/> 8 Chlorination	<input type="checkbox"/> 12 Other	
17. Name of Treatment Works	18. Max. Treatment Capacity	19. Grade of Plant Operator Req.	20. Est. Cost
	GPD		
Description:			

DISTRIBUTION

22. Type of Project		23. Type of Storage	24. Est. Distribution Cost
<input type="checkbox"/> 1 Cross Connection	<input checked="" type="checkbox"/> 3 Transmission	Elevated _____ Gals.	\$26,000
<input type="checkbox"/> 2 Interconnection	<input type="checkbox"/> 4 Fire Pump C1,	Underground _____ Gals.	
25. Anticipated Distribution			26. Designed for fire flow?
System Demand: Avg. <u>29,000</u> GPD Max. <u>67,000</u> GPD			<input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No
27. Description:			
Installation of +810 L.F. of 2" Type K Copper waterline including 2 tees and 2 valves to serve a 7-lot expansion.			



LOUIS HEIMBACH
County Executive

Department of Health

SALLY FAITH DORFMAN, M.D., M.S.H.S.A.
Commissioner of Health

May 4, 1989

Silver Stream, Inc.
c/o Lester Clark
614 Little Britain Rd.
New Windsor, NY 12550

Re:
Approval of plans & specs for:
Sanitary Sewer Ext. to serve
7-Lot Expansion, Silver Stream T.P.
T. New Windsor

Dear Sir:

Plans for the extension of sanitary sewers and/or within the above mentioned service area have been examined and found to be consistent with the appropriate regulations of the State Department of Environmental Conservation and the Orange County Department of Health. These plans were prepared by Lanc & Tully, P.C., and dated March 23, 1988, (latest revision - April 28, 1989).

Approval is granted for the construction of these works subject to the following conditions:

1. THAT the facilities shall be fully constructed and completed in compliance with the engineering report, plans and specifications as approved.
2. THAT the construction of the facilities shall be under the supervision of a person or firm qualified to practice professional engineering in the State of New York under the Education Law of the State of New York.
3. THAT where such facilities are under the supervision of a professional engineer, he shall certify to the Department and to the permittee that the works have been fully completed in accordance with the approved engineering reports, plans, specifications and permit.

Silver Stream T.P.


Page 2

May 4, 1989

4. THAT the maximum infiltration rate shall not exceed 100 gpd per inch diameter of sewer per mile of sewer length including manholes.
5. THAT this approval shall be for sanitary sewers to service a 7-lot expansion on Post Road.

Plans bearing our stamp of approval have been forwarded to the design engineer for delivery to you.

Very truly yours,



M.J. Schleifer, P.E.
Assistant Commissioner

MJS/aje

cc: DEC - White Plains
Engineer
T. New Windsor
File

enc.

LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

February 8, 1989
April 5, 1989

ENGINEER'S REPORT
SEWERLINE EXTENSION
TO SERVE
7-LOT EXPANSION
SILVER STREAM VILLAGE
TOWN OF NEW WINDSOR
ORANGE COUNTY, NEW YORK

I. Introduction

The Silver Stream Village is a 31± acres mobile home park located on the southerly side of N.Y.S. Route 207, across from Stewart Airport. It is situated within the R-4A Zoning District of the Town of New Windsor. It currently has 130 mobile homes.

This project involves expansion of the Mobile Home Park by the addition of 8 new mobile home lots at the westerly side of the park. The existing narrow paved drive will be widened and extended to a 24' loop road to serve as access for the proposed additional mobile homes. The existing mobile home unit #18 is to be eliminated due to the construction of the proposed road as indicated in the plan. Hence, this expansion will give Silver Stream Village a total of 137 mobile homes.

II. Overall Land Description

The project site generally is open field and has a gentle slope downward in a northerly and north-easterly direction. There was a small stream flowing north-easterly across the project site. This stream has been diverted running along the northeast side of the property line as shown on the plans. Based on N.Y.S.D.E.C. Mapping, there are no Protected Freshwater Wetlands on the site.

Main Office	•	P.O. Box 687, Route 207, Goshen, N.Y. 10924	•	(914) 294-3700
Branch Office	•	P.O. Box 373, Route 55, LaGrangeville, N.Y. 12540	•	(914) 473-3730

MAY 17 1989

87 - 46

III. Sanitary Sewer Collection System

The proposed project will be serviced by the existing Town of New Windsor Wastewater Treatment Facility located on Ceasars Lane in the Town of New Windsor. The sewage from this site will be collected by the proposed 6" PVC gravity sewer line. It will be connected to an existing manhole at the intersection of Silver Stream Oval and the proposed Post Road, which discharges into the collection lines of New Windsor Sewer District No. 19.

Design criteria for determining waste quantities and sewage system design were based on "Standards for Waste Treatment Works", NYSDEC 1980. The flow rates for a single wide and double wide unit mobile home are 200 gallons per day and 300 gallons per day respectively. Four single wide and three double wide mobile homes are proposed in this project.

$$\begin{aligned}\text{Design flow} &= 4 \times 200 \text{ gpd} + 3 \times 300 \text{ gpd} \\ &= 1700 \text{ gpd} \\ &= 1.18 \text{ gpm}\end{aligned}$$

The peak flow is obtained by using peak factor of 4 based on "Harmon" formula.

$$\begin{aligned}\text{Peak flow} &= 1.18 \text{ gpm} \times 4 \\ &= 5 \text{ gpm}\end{aligned}$$

Based on the information provided by the Town Officials, the design capacity of the the existing Wastewater Treatment facility is 5.0 MGD and the present average daily flow is 3.2 MGD. Therefore, the existing facility will be able to handle the design flow of 1700 gpd or 0.0017 MGD generated by the proposed project.

Four manholes and approximately 837' of 6" PVC sewer main are proposed as part of the proposed sewage system. They are to be placed at the locations where the sewer line changes grade or alignment as shown on the Plans. Minimum slope required for the proposed sewer line is 1/8" per foot (1.0%).

Each proposed mobile home site will be connected to the proposed 6" sewer main with a 4" PVC gravity service line. During installation of the proposed gravity sewer main, 4" tee-wyes will be installed for each lot.

The estimated cost for the proposed sewage system including installation is shown as the following:

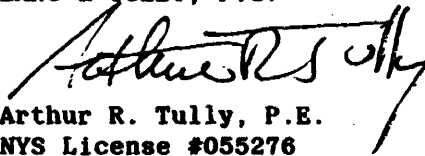
<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
6" PVC	837 FT.	\$ 21.50/FT.	\$ 17,995
4' DIA MANHOLE			
0 - 6' DEEP	3	\$1,980	\$ 5,940
6' - 9' DEEP	1	\$2,175	\$ 2,175
HOUSE CONNECTION	8	\$ 550	\$ 4,400
		SUBTOTAL	\$ 30,485
		CONTINGENCY	<u>\$ 3,048</u>
		TOTAL	\$ 33,533
		SAY	\$ 34,000

The proposed gravity sewer lines and associated appurtenances as shown on the Plans will be owned and maintained by Silver Stream, Inc.

Sewer Line Information (depth velocities, etc.) is enclosed as part of this report.

Respectfully Submitted,

LANC & TULLY, P.C.

A handwritten signature in dark ink, appearing to read "Arthur R. Tully", is written over the printed name and license information.

Arthur R. Tully, P.E.
NYS License #055276

Attachments

ART/YN/kgs

sewerlin

LANC & TULLY

ENGINEERING AND SURVEYING, P.C.

February 8, 1989
Revised April 5, 1989

ENGINEER'S REPORT
WATERLINE EXTENSION
TO SERVE
7-LOT EXPANSION
SILVER STREAM VILLAGE
TOWN OF NEW WINDSOR
ORANGE COUNTY, NEW YORK

I. Introduction

The Silver Stream Village is a 31 \pm acres mobile home park located on the southerly side of N.Y.S. Route 207, across from Stewart Airport. It is situated within the R-4A Zoning District of the Town of New Windsor. It currently has 130 mobile homes.

This project involves expansion of the Mobile Home Park by the addition of 8 new mobile home lots at the westerly side of the park. The existing narrow paved drive will be widened and extended to a 24' loop road to serve as access for the proposed additional mobile homes. The existing mobile home unit #18 is to be eliminated due to the construction of the proposed road as indicated in the plan. Hence, this expansion will give Silver Stream Village a total of 137 mobile homes.

II. Overall Land Description

The project site generally is open field and has a gentle slope downward in a northerly and north-easterly direction. There was a small stream flowing north-easterly across the project site. This stream has been diverted running along the northeast side of the property line as shown on the plans. Based on N.Y.S.D.E.C. Mapping, there are no Protected Freshwater Wetlands on the site.

Main Office • P.O. Box 687, Route 207, Goshen, N.Y. 10924 • (914) 294-8700
Branch Office • P.O. Box 373, Route 55, LaGrangeville, N.Y. 12540 • (914) 478-8730

87- 46

III. Water Distribution System

Water for the proposed project will be provided by the existing private water supply system of Silver Stream Village, which currently serves 130 mobile homes. Based on previous Engineer's Reports for this property, there are three existing on-site wells which produce a total yield of 61 gpm. There is an existing hydropneumatic system consisting of a pump house, 5,000 gallon hydropneumatic tank, two (2) transfer pumps, 20,000 gallon storage tank, hydrochlorinator, and emergency generator to be rented as needed. In addition, there is a 5,000 gallon fire storage tank. The water currently is distributed to the existing mobile homes via 4" PVC pipe and 2" copper pipe network.

The proposed 7-Lot expansion will produce daily water demand of 1,700 gallons per day. This amount is derived based on hydraulic loading of 200 gallons per day for a single wide mobile home and 300 gallons per day for a double wide mobile home. An average daily rate of 224.5 gallons per unit was obtained based on the 1988 Water System Operation Report of the existing water supply system. This project will increase the water demand approximately 6% of the current water usage by the existing 130 mobile homes.

The proposed development will be connecting to the existing 4" waterline and 2" waterline as shown on the Plans. All proposed water mains in the project are 2" diameter copper pipes. Water service line to each proposed mobile home unit is 3/4" type K copper pipes.

Based on the "Engineer's Report for the Water Distribution System for Silver Stream Village" prepared by McGoey and Hauser Consulting Engineers,

P.C., latest revision May 30, 1985, the existing water supply system was designed to have a minimum pressure of 20 psi at the highest fixture of any unit and pressure in the water main is to be maintained at the minimum of 35 psi. According to the analysis done in the report mentioned above, the design was done taking into consideration the worst case of pressure loss occurring at a unit located at an elevation of 400 feet.

Pressure Tests have been done at four existing units to verify the designed pressure. The water pressure at the unit which has the worst case of pressure loss as mentioned above, occupied by Babcock (Unit #54), measured to be 50 psi. Water pressures at existing Unit #4 (shown as Unit #3 on Sheet 1 of 3) (Kruger), Unit #80 (Arndt), Unit #120 (Heinz) were measured to be 60 psi, 52 psi, and 58 psi respectively. Since the proposed project site has lower grades and is closer to the water storage area than the existing worst case unit mentioned earlier, the water pressure should be adequate for the proposed water system. The water pressure of the proposed water system will be comparative with that of the existing mobile homes shown on the Plans since they are situated at same area and generally at the same elevation.

Using 300 gpd as the average water consumption for each unit, the maximum water demand for 8 units is computed to be 7 gpm by using a factor of 4.

Average water demand = $300 \text{ gpd} \times 8 = 2400 \text{ gpd}$.
Maximum water demand = $2400 \times 4 = 9600 \text{ gpd} = 7 \text{ gpm}$.

Friction loss due to the proposed 2" type "K" copper pipe with the flow of 7 gpm is calculated to be 1.1+ psi. With the water pressure at the existing Unit #4 (shown as Unit #3 on Sheet 1 of 3) as 60 psi, the

proposed water line extension should have adequate water pressure at all points in the system under normal conditions.

The estimated cost for the proposed water distribution system including installation is shown as follows:

<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
2" Copper	740 FT.	\$ 18/FT	\$ 13,320
2" Valves	2	\$ 650	\$ 1,300
2" Fittings	3	\$ 500	\$ 1,500
HOUSE CONNECTION	8	\$ 830	\$ 6,640
		SUBTOTAL	\$ 25,166
		CONTINGENCY	\$ 2,406
		TOTAL	\$ 26,466
		SAY	\$ 26,000

The proposed extension of the water distribution system will be part of the private water system serving Silver Stream Village. It will be owned and maintained by Silver Stream Inc. Based on the discussion with the owner of the above referenced project, it is the intension of Silver Stream Village to connect to the Town of New Windsor Water System as soon as it is available. This future connection will not be affected by the proposed waterline extension.

Respectfully Submitted,

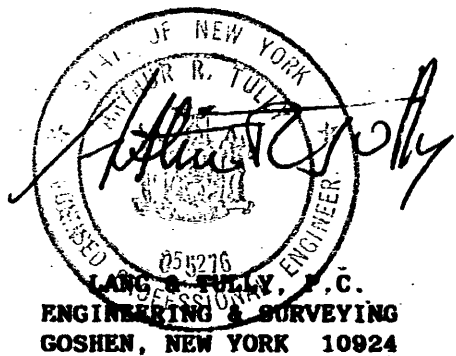
LANC & TULLY, P.C.


Arthur R. Tully, P.E.
NYS License #055276

Attachments
ART/YN/kgs
waterlin

TECHNICAL SPECIFICATIONS
EXTENSION OF SEWAGE COLLECTION SYSTEM
TO SERVE
7-LOT EXPANSION
SILVER STREAM VILLAGE
MOBILE HOME PARK

TOWN OF NEW WINDSOR
ORANGE COUNTY, NEW YORK



FEBRUARY 1989

1. WORK EMBRACED AND SCOPE OF PROJECT

The work involved in the project consists of the installation of gravity sewers which will discharge into the New Windsor Sewer District No. 19 Sewage Collection System in the Town of New Windsor to serve 7 mobile homes on the proposed 7-Lot Expansion of Silver Stream Village Mobile Home Park.

Approximately 827' of 6" sanitary sewer main with 4 manholes will be installed at the proposed Post Road, between existing mobile home units #6 and #7, and along the westerly side of Silver Stream Oval. The proposed gravity sewer will be connected to the existing New Windsor Sewer District No. 19 Sewage Collection System at an existing manhole located at the corner of the intersection of Silver Stream Oval and proposed Post Road as shown on the plans.

The work on this project will also include any pavement, shoulder, curb and sidewalk removal; excavation, bracing and support of adjoining ground or structures where necessary; handling all drainage and ground water conditions; the protection from damage to existing lines or other services or structures; traffic maintenance and safety; guarding the site; unloading, hauling, distribution and laying of pipes; cleaning up the site; testing the sewer lines visually, for leakage and deflection; maintenance of the streets and other surfaces over the trenches, and replacement of pavement and shoulders of roads, parking areas and driveways, where required.

Contractor shall provide all labor, materials, equipment and services for the complete site preparation, excavation, installation, backfilling and restoration of all work as shown on the drawings and specified herein. During construction, local and through traffic must be maintained. Special care must be taken to avoid damaging the existing utilities. In the event that existing utilities are broken, repairs must be made immediately and be acceptable to the Engineer.

TABLE OF CONTENTS

DIVISIONS:

- 1. Work Embraced and Scope of Project**
- 2. Specifications for the installation of sewers**

DIVISION 2

TABLE OF CONTENTS

SPECIFICATIONS FOR THE INSTALLATION OF GRAVITY SEWERS

2.01	General
2.02	Sewer Pipe and Fittings
2.02.1a	Pipe-Gravity Sewers
2.02.2a	Fittings-Gravity Sewers
2.03	Manholes
2.04	Handling of Materials
2.05	Inspection of Material
2.06	Construction in Road Rights-of-Way
2.07	Excavation, Dewatering And Preparation of Trenches
2.07.1	Trench Excavation
2.07.2	Excavation for Structures
2.07.3	Dewatering
2.08	Excavation of Rock
2.09	Alignment and Grade
2.10	Pipe Laying
2.10.1	Preparation of Trench Bottoms
2.10.2	Laying of PVC Pipe
2.11	Jointing
2.12	Building Connections
2.13	Testing of Sewer
2.13.1	Preliminary Flushing
2.13.2	Gravity Sewers
2.13.2.1	Visual Test
2.13.2.2	Leakage Test
2.13.2.3	Deflection Test
2.13.3	General
2.14	Backfilling Trenches
2.15	Preventive Measures During Construction

- 2.16** **Select Fill Material**
- 2.16.1** **Gravel Used in Backfilling**
- 2.16.2** **Crushed Stone**
- 2.17** **Sewers Near Water Mains**
- 2.18** **Work Within City, Town and Village Streets and Driveways**
- 2.19** **Restoration of City, Town and Village Streets, Driveways
and Shoulders**
- 2.19.1** **Resurfacing-City, Town and Village Streets and Driveways**
- 2.19.2** **Resurfacing-Easements**
- 2.20** **Clean-Up**
- 2.21** **Final Inspection Preceeding Acceptance**

2. SPECIFICATIONS FOR THE INSTALLATION OF GRAVITY SEWERS

2.01 General

The Contractor shall supply all labor, tools, materials, and equipment to construct, and test the sewers as described in these specifications and the accompanying drawings. All references to the standards, specifications, regulations, etc., are meant to be to their last revisions.

2.02 Sewer Pipe And Fittings

All pipe and fittings shall conform to the sizes shown on the drawings and shall be PVC or other materials, subject to Engineer's approval.

2.021a Pipe-Gravity Sewers

PVC Pipe shall be SDR-35 and shall meet or exceed the requirements of ASTM specifications D 3034 and shall be as manufactured by JM, or approved equal. All pipe shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. Provision must be made for contraction and expansion at each point with a rubber ring. The pipe shall be installed as per manufacturer's recommendations.

2.02.2a Fittings - Gravity Sewers

PVC Fittings used shall meet or exceed the requirements of ASTM Specifications D-3034.

2.03 Manholes

Manholes shall be constructed of precast concrete rings, with manhole ring gaskets, with cast iron frames and covers, as shown on the drawings. Base slabs shall be at least 8" thick. All sections of the manhole shall conform to Specifications for Precast Reinforced Concrete Mahole Sections, ASTM Specifications C-478.

Manholes shall be built up so that the cover, when in place, will be at the required grade. However, concrete blocks and/or brick shall not be used for build up of more than 11 inches. All covers shall be of cast iron and shall be of the same design. The frame and cover shall be Campbell Foundry Pattern No. 1007C or approved equal. Manhole steps shall be provided as shown on the drawings. Each manhole shall have a smooth concrete channel built between the pipes. The channel should be a smooth continuation of the pipes providing good hydraulic properties. In manholes on straight runs, a half of pipe can be laid between the pipes to provide smooth bottom of the channel. The completed channel cross-section should be U-shaped. The height of the

channel shall be the full diameter of pipes. Benches on sides of the channel should provide good footing with a slope of 1" in 12" toward the channel. Wherever the difference in elevation between incoming sewer and the outgoing sewer is 24" or more a drop connection shall be provided as shown on the detail. If the difference in elevation is less than 24", the channel shall be filleted to prevent deposition of solids.

2.04 Handling of Materials

Materials for use on this project shall conform with the specified material. Upon delivery to the project site, material shall be stored in a controlled storage area until ready to be used. When work is to be started on a pipeline, pipe may be removed from the storage yard and the pipe carefully placed along the route of the trench. Care must be taken to place these pipes out of the way of any traffic and out of the way of construction. Material affected by the weather, such as rain, snow, cold, or heat, shall be stored in shelters to protect such material.

The Contractor is responsible for this material and its protection from any damage until such material is installed, inspected, and accepted as complete by the Engineer.

2.05 Inspection of Material

All material on this project shall be available for inspection by the Engineer and shall not be used, if defective. Any material found defective shall be removed immediately from the project site. The Engineer may at his discretion paint markings on any defective material.

2.06 Construction in Road Rights-of-Way

Traffic is to be maintained at all times during the progress of the work and adequate signs, barricades and lights shall be provided. The Contractor is fully responsible for maintenance and protection of traffic.

Two-way traffic will be ensured at the end of each working day. The length of trench to be opened shall be limited so as to provide minimum of open trench at any single time. At the end of each working day ALL open trench shall be backfilled and tamped. No open trench shall be allowed at the end of a working day.

2.07 Excavation, Dewatering, and Preparation of Trenches

2.07.1 Trench Excavation

Excavation and preparation of trench shall be in accordance with AWWA C-600 as applicable. The Contractor shall provide all sheeting, shoring and bracing which may be needed, and shall keep the trench free from water. Every

reasonable effort shall be made to keep the width of the trench at a point level with the top of the pipe, no greater than pipe diameter plus 24". The trench width in rock or among boulders shall be sufficient to leave at least 6" of clearance between the pipe and any rock or boulder. Excavation in the plain earth shall not ordinarily be carried below the bottom of the pipe, but rock shall be excavated to a depth of 4" below the pipe. If excavation is carried below the pipe bottom for any reason, a backfill of sand or soft dry earth, free of stone, shall be used to restore the trench to its proper depth. This material will be thoroughly compacted and then shaped to fit the pipe. Where required, pavement shall be cut with a saw. Breaking of pavement with backhoe, etc., shall not be allowed.

In road Rights of Way every effort shall be made to keep the trench width at ground level not more than 36".

Unless trench banks above the top of the pipe are cut back on a stable slope, sheeting and bracing shall be provided, as necessary, to prevent caving or sliding, to provide protection for workmen and the pipe, and to protect adjacent structures and facilities. Sheeting shall not be braced against the pipe. The bracing and sheeting shall be removed only after the pipeline has attained sufficient strength to withstand the loads resulting from such removal.

Blasting for excavation shall be permitted only after proper precautions are taken for the protection of persons and property. No blasting shall be done without 48 hour notice. Any damage caused by blasting shall be repaired by the Contractor at his own expense. The blasting procedure, including protection of persons and property, shall be in strict accordance with federal, state and local regulations. In sensitive areas an alternate method to blasting should be considered.

The Contractor shall provide, erect and maintain adequate barricades, warning signs and lights at all excavations near the public highways or other points of danger. Rules and regulations of local authorities regarding safety provision shall be observed.

2.07.2 Excavation for Structures

Excavate to elevations and dimensions shown of the plans. Excavation carried below the depth of the footings and bottom of various structures shall be backfilled with washed gravel or crushed stone, thoroughly compacted by mechanical equipment before the footings and floors are poured. Banks shall be sloped at a safe angle or shored, if required. The Contractor shall provide pumping facilities to keep the excavation clear of water at all times at no additional cost to the Owner. The Contractor shall do all bracing, sheeting and shoring necessary to perform and protect all excavation as required for safety or to conform to governing laws.

2.07.3 Dewatering

The Contractor shall at all times during construction, provide and maintain proper and satisfactory means and devices for the removal of all water entering the excavations, and shall remove all such water as fast as it may collect, in such a manner as not to interfere with the prosecution of the work or the proper placing of sewer or masonry, or other work.

Removal of water includes the construction and removal of cofferdams, sheeting and bracing, the furnishing of materials and labor necessary therefore, the excavation and maintenance of ditches and sluice-ways and the furnishing and operation of pumps, well-points, and appliances needed to maintain thorough drainage of the work in a satisfactory manner.

Where groundwater is encountered, it shall be dewatered by lowering and maintaining the groundwater beneath such excavations at an elevation not less than 6 inches below the invert of sewer and bottom of structure at all times when work thereon is in progress, during subgrade preparation and the placing of the structure or pipe thereon.

Water pumped or drained from excavations, or any sewers, drains or water courses encountered in the work, shall be disposed of in a suitable manner without injury to adjacent property, the work under construction, or to pavements, roads, etc. No water shall be discharged to sanitary sewers. Sanitary sewage shall be pumped to sanitary sewers or shall be disposed of by an approved method.

2.08 Excavation of Rock

Rock encountered in trenches or other excavation shall be removed to a depth of at least 6 inches below the proposed elevation of the base of this structure and 4" inches below the proposed bottom of the pipe, and at least 6 inches beyond the limits of the structure and 6" inches beyond the pipe walls. Blasting of rock shall be limited to that material that cannot be removed with a backhoe.

In blasting rock, care must be taken to eliminate any danger to adjacent property, buildings, pipelines or other utilities.

The Contractor must be licensed to do blasting and must have adequate insurance. In blasting in built-up areas, the area to be blasted must be covered with a blasting mat to prevent fragments of rock from being blown from the area. In sensitive areas the Contractor should consider use of a non-explosive demolition method.

2.09 Alignment And Grade

Alignment and grade of pipelines and structures shall be given by the Engineer. Cut sheets showing location and grade will be provided and such grades and alignment must be followed. Any deviation from established alignment and/or grade must be approved by the Engineer prior to construction of that portion of the project.

2.10 Pipe Laying

2.10.1 Preparation of Trench Bottoms

The trench bottoms should be smooth and free from stones greater than 1/2" diameter, large dirt clods, and any frozen material. Generally, loose material left by the excavator on the trench bottom will be adequate for bedding the pipe barrel so that it is fully supported.

Where the excavator cuts a very clean bottom, soft material can be shaved down from the sidewalls to provide needed bedding. If the trench bottom is rocky or hard, as in shale, place a 4" layer of selected backfill material to provide a cushion for the pipe.

2.10.2 Laying of PVC Pipe

All PVC Gravity pipe shall be laid according to manufacturer's recommended procedures.

Bell holes shall be excavated in the trench bottom to assure uniform support under the barrel of the pipe. PVC Gravity pipe shall be bedded in 4" of sand free from stones larger than 1".

All pipes and fittings shall be carefully handled to avoid damage, and while they are suspended over the trench, before lowering, they shall be inspected for defects. Before the pipe is laid, all lumps, blisters, excess coal tar, dirt, oil, grease and moisture shall be removed from inside the pipe. After pipe is laid, care shall be taken to avoid the entrance of dirt or water from the trench by use of tight bulkheads. The handling of material shall conform to AWWA Standard C-600, AWWA Manual M-23 and manufacturer's recommendations.

2.11 Jointing

Joint material for the pipeline shall be as specified for the type of pipe. Since the greatest source of leaks in pipelines is at joints, special care and handling shall be used in the preparing for and the making of said joints. Pipes at joints shall be clean and free from any foreign material, dirt and so forth. Manufacturer's recommendations and ASTM D 2855 shall be followed for PVC pipe and fittings.

Rubber rings shall be carefully installed and pipes carefully forced together to complete the joint. After joint is completed a test gauge shall be used on every joint to determine the position of the rubber ring.

Use teflon tape where threaded connections are called for.

2.12 Building Connections

Where house services are to be provided, a standard Tee-Wye fitting shall be installed. Location of such house services will be laid out by Engineer. Ends of the house services will also be laid out by Engineer. Ends of the house services shall be provided with an air and water tight cap to permit future testing of the pipeline.

2.13 Testing of Sewers

All sewer lines shall be tested upon completion of their installation. Sections of sewer which fail to pass the tests should have defects located and repaired or replaced and be retested until within specified allowances. Prior to any test, all sewer lines should be cleaned by flushing.

2.13.1 Preliminary Flushing

The main shall be flushed prior to testing.

The flushing velocity shall not be less than 2.5 ft/sec. No site for flushing should be chosen unless it has been determined that drainage is adequate.

2.13.2 Gravity Sewers

2.13.2.1 Visual Test

All sewer lines shall be inspected visually to verify accuracy of alignment and freedom from debris and obstructions between manholes.

2.13.2.2 Leakage Test

At intervals ordered or approved by the Engineer, and not to exceed lengths of 1000 feet, the pipe, including manholes, shall be tested for leakage by measuring infiltration over a watertight weir installed at the lower end of each section under test; or by filling the pipe with water and measuring the loss in a given period of time. The former method may be used when ground water levels are at least two feet above the top of the pipe for the entire length of the section tested during the period of the tests. If ground water levels are lower, the tests shall be made by filling the pipe

with water to provide a head at least two feet above either the top of the pipe at the highest point of the pipe line under test, or at ground water level, whichever is higher. The tests shall be carried out for a period of at least two hours. The total leakage of any section shall not exceed the rate of 100 gallons per mile of pipe per 24 hours per inch of nominal diameter. If leakage exceeds the specified amount, the contractor shall make the necessary repairs or replacements required to reduce the leakage to within the specified limits and the tests shall be repeated until the leakage requirement is met.

Alternately an air test may be performed in lieu of the infiltration or exfiltration test, if approved by the Engineer. The air test shall be performed in accordance with the current ASTM C-828 and manufacturer's recommended procedures. Determine the back pressure due to groundwater. Starting pressure for the test shall be at least 3.5 psig greater than the average back pressure above the pipe invert. The minimum time, in seconds, required for 0.5 psi pressure drop from the starting pressure, shall not be less than 462 times the pipe diameter in feet. If any test or any section of pipe line discloses an air loss rate greater than that permitted, the contractor shall, at his own expense, locate and repair the defective joints and pipe and retest until the air loss rate is within the specified limits.

2.13.2.3 Deflection Test

Pipe deflection shall be measured not less than ninety (90) days after the backfill has been completed as specified, and shall not exceed seven and half (7.5) percent of base diameter as described in ASTM 3034.

Deflection shall be measured with a rigid mandrel (Go/No/Go) device, cylindrical in shape and constructed with a minimum of nine or ten evenly spaced arms or prongs. Drawings of the mandrel with complete dimensions shall be submitted to the Engineer for each diameter of pipe to be tested. The mandrel shall be hand pulled by the Contractor through all sewer lines. Any section of sewer not passing the mandrel shall be corrected either by uncovering the sewer and replacing it and/or recompacting the trench, or by a use of a device specifically designed to be inserted in PVC pipe in order to reshape the pipe and to compact the soil around the pipe. The pipe shall be retested not less than 90 days after the correction has been made.

2.13.3 General

The Contractor shall furnish the necessary equipment, materials and labor for making the tests as specified and shall perform the tests at his own expense. Any repairs, corrections, etc. including labor, material, etc., shall be done at the Contractor's expense and at no additional cost to the owner.

Backfilling Trenches

After laying and inspecting the pipe, each length shall be carefully backfilled by placing and compacting approved material, (sand, gravel, loose earth, etc.) free from stone, around the pipe. Backfill shall hold the pipe in place, but not tamped to cause movement of the pipe. This careful placing shall continue until a minimum of 12" of earth has been placed and tamped over the top of the pipe. No stones larger than 3/4" shall be placed in this portion of the backfill. In areas other than Road Right of Ways, from 12" above the pipe to the grade shown on the drawings or fixed by the Engineer, the trench shall be backfilled with suitable material that shall contain no stone larger than 1/2 cubic foot and shall be carefully placed and compacted in layers.

Backfilling of Pipe:

- A. Up to 12" above pipe with sand or loose earth, free from stones larger than 3/4" in road shoulders and under permanent pavements, road crossings, curbs, driveways, R.O.W.'s, i.e. all pipe laid on this project.
- B. In road shoulders, under permanent pavements, road crossings, curbs, and/or driveways, if permitted by the Engineer, from 12" above pipe to 12" below surface, suitable excavated material, compacted, no stones larger than 4" (maximum 2/3 lift thickness). Top 12" to be NYS DOT ITEM 304.02, Sub-base course TYPE 1.
- C. In Right-of-Way having grass surface, from 12" above pipe to 3" to 6" below surface, suitable excavated material, no stones larger than 1/2 cubic foot. Top 3" to 6" to be topsoil with seeding and shrub restoration and/or sod replacement.
- D. Tamping of all backfill in 12" lifts, identification tape within 12" of surface.
- E. Backfill where excavated material not suitable.

All excavated material will be removed as waste and replaced with selected R.O.B. gravel with no stones larger than 2" diameter. The material will be placed in approximately 8" to 12" layers and machine tamped the full length, width and depth of the trench. The trench is to be leveled off at pavement grade. Settlement will be corrected by the Contractor at all times.

2.15 Preventive Measures During Construction

Keeping Pipe Clean and Dry: Precautions shall be taken to protect pipe interiors, fittings and valves against contamination. Pipe delivered for construction shall be strung so as to minimize entrance of foreign material. When pipelaying is not in progress, as, for example, at the close of the day's work, all openings in the pipeline shall be closed by water tight plugs. Joints of all pipe in the trench shall be completed before work is stopped. If water accumulates in the trench, the plugs shall remain in place until the trench is dry.

2.16 Select Fill Material

In road crossing and in the road pavement, backfill will generally be run-of-bank gravel up to the surface.

2.16.1 Gravel Used in Backfilling

The gravel shall consist of natural or artificial mixture of hard durable pebbles, rock fragments and soil binder, free from soft particles and excess clay, and shall conform to the following gradation:

Sieve	Percent of Weight Passing
2"	100
1/4"	25-60
No. 200	0-10

This material shall be placed in maximum 12" uniform layers, without segregation and thoroughly compacted by means of mechanical tampers designed for the job.

The trench surface shall be brought to a level even with the adjacent pavement. The surface of the trench must be kept level with the adjacent pavement by the addition of material until it is ready for permanent restoration.

2.16.2 Crushed Stone

Crushed stone or pea gravel specified in the specifications and/or shown on the drawings shall conform to the following gradation by weight.

Sieve	Percent of Weight Passing
3/4"	100
1/2"	90 - 100
3/8"	40 - 70
No. 4	0 - 15
No. 8	0 - 5

Where crushed stone #2 is specified, it shall conform to NYS DOT Specification Section 703.03.

2.17 Sewers Near Water Mains

Water Main Crossings and Separations

Separate existing water lines from sewer line at least 10' horizontally (measured edge to edge).

At street intersections, or at other locations where water and storm and sanitary sewer lines must cross, provide a minimum vertical distance of 18" between the outside of the water main and the outside of the sewer main and 6" minimum vertical distance between the outside of storm sewer and the outside of sanitary sewer.

One full length of sewer main shall be centered on water main crossings so joints are equidistant and as far as possible from watermain.

When it is impossible to obtain proper horizontal and vertical separation as stipulated above, a variance must be approved by the reviewing authority. Provide adequate support for both pipes to eliminate any possibility of settling. When 18" vertical separation cannot be achieved, the sewer must be pressure pipe and tested to the standard of water pipe.

2.18 Work Within the City, Town and Village Streets And Driveways

After the pipe has been installed and 1' of cover has been placed and compacted over the pipe, in accordance with these specifications, the Contractor shall backfill the trench with suitable material, in accordance with these specifications, which may be the material that was removed from the trench during excavation, if approved by the Engineer. If this material is considered not to be suitable by the Engineer then the Contractor shall backfill the trench with run-of-bank gravel, approved by the Engineer.

2.19 Restoration of City, Town and Village Streets, Driveways and Shoulders

All streets across which the sewer lines are laid, shall be restored to their original conditions. Settlement of trenches shall be corrected by the Contractor at all times.

2.19.1 Resurfacing - City, Town and Village Streets and Driveways

The pavement over the trench shall be restored by Contractor.

All trenches shall be thoroughly compacted as previously specified and shall be allowed to settle at least for two weeks under traffic prior to the commencement of resurfacing. Edges between old and new pavement shall be straight and square, cut by either saw or wheel cutter.

2.19.2 Resurfacing-Easements

Wherever the pipe crosses lawns, fields, cleared areas, or disturbs shrubs, fences, walls, they shall be carefully replaced in a condition equal the existing unless otherwise directed by the Engineer.

Surfaced area shall be graded to underside of surfacing. Lawns and planted areas shall be graded to 3" below finished grade. Rough grading of all areas within the project including excavated and filled sections and adjacent transition areas shall be reasonably smooth, compacted and free from irregular surface changes. All ditches, swales and gutters shall be finished to drain readily.

After completion of all work and rough grading, disturbed areas shall be covered with at least 3" of topsoil, final graded, machine raked, smoothed and seeded.

Ground limestone shall be spread on the topsoil at the rate of 20 pounds per 100 square feet and disked into the soil. After this, fertilizer shall be spread at a rate of 15 pounds per 1,000 square feet. Fertilizer shall be 10-6-4 grade and uniformly worked into the upper inch of soil. Surface shall then be rolled and seeded with grass mixture containing not less than 10% annual rye, 20% Kentucky blue grass and 10% alta fescue. Seeding shall be at a rate of 50 pounds per acre. Wet or moldy seed will be rejected. A soil fabric or similar approved material shall be used on all slopes steeper than 1 on 4 and at the swale bottoms.

As a rule cutting of trees is not permitted. The layout shall be such that it avoids cutting of trees as much as possible. If it becomes necessary to cut any tree it shall be done with the written approval of the Engineer. This applies to trees above 4" caliber, measured 12" from the ground.

2.20

Clean-Up

The Contractor shall remove all temporary structures, rubbish, waste materials, trees, stumps, boulders, etc., resulting from his operations, from all public and private property, at his own expense. This material may be hauled to a disposal site approved by the Engineer. Such disposal site will be made available within reasonable limits. Private lands will be restored to their original condition, as near as is reasonable possible.

Storm drainage ditches and structures will be restored or replaced. Substitute drainage facilities will be maintained where needed during construction. Good construction methods shall be followed in this work.

Special attention shall be paid to grass restoration where lawns now exist, and the Contractor shall be solely responsible for the replacement of all disturbed areas.

2.21 Final Inspection Preceding Acceptance

Inspection will be made by the Engineer of all phases of construction at the time of construction. At that time, the Engineer will have indicated his acceptance or rejection of the item under inspection. If rejected at that time, repair or replacement must be made by the Contractor.

Upon completion of the entire project, the Engineer will review items previously inspected. Following this review a check sheet will be provided for the Contractor. If any items still need correction or adjustment, Contractor shall do those items and are complete and according to plan and specifications the Engineer will issue a certificate of completion and acceptance.

SILVER STREAM TRAILER PARK (198-16) PAGE 207

Lester Clark and a representative from Lanc & Tully came before the Board representing this proposal.

Mr. Clark: We have secured Board of Health approval and complied with the workshop comments and I'd like to request your review for final site plan. One of these maps is a sewer map and one is a water map, otherwise the lot configurations are the same. This is on the westerly side of the project and we eliminated one unit which is now gone, lot #18 on the original map and bring a loop through, I think, the rest of the map speaks for itself. That is where the proposed 24 foot road will enter into Silver Stream Mobile Drive. Do you have a map?

Mr. Lander: It says unit 18 to be eliminated.

Mr. Clark: In the field, it has been eliminated at this time by the way. We are on our own well system here and have shown adequate water capacity and are tying the new seven lots into the municipal sewer system.

Representative from Lanc & Tully: Orange County Health Department has approved both the water and sewer extensions which are shown on the map.

Mr. McCarville: Are these utilities the wires underground?

Mr. Clark: Yes, they will be all underground. Each site has off-site parking for two cars and we have indicated on here we are going to provide paved parking for all the older units as they exist, half of them have it now, half don't. It is not part of the proposal but that is what will be done so we can clean up that area.

Mr. VanLeeuwen: That is in the existing part?

Mr. Clark: Yes, that is the existing which these will face the rear of.

Mr. McCarville: I'd like to see an approval box located on this when you submit the map. This should be marked site plan. I don't see anywhere, this says it is a site plan.

Representative from Lanc & Tully: We went into the Health Department with one plan showing both and they requested it be separated since it is two applications, one for sewer and one for--

Mr. Clark: He wanted the terminology on there.

Mr. McCarville: It should say Site Plan Silver Stream Village and approval map up here, other than those requirements, I make a motion that we approve the plan of the Silver Stream Village.

Mr. Schiefer: Did you read Mr. Edsall's comments, item #3?

Mr. McCarville: Yes, I make a motion that we waive a public hearing with regard to Silver Stream Trailer Park Site Plan (87-46).

Mr. Soukup: I will second that motion.

ROLL CALL:

Mr. McCarville	Aye
Mr. VanLeeuwen	Abstain
Mr. Soukup	Aye
Mr. Lander	Aye
Mr. Schiefer	Aye
Mr. Pagano	Aye

Mr. Edsall: You took lead agency on September 14th, 1988.

Mr. McCarville: I make a motion that we declare a negative declaration as it pertains to the SEQR process with regard to Silver Stream Trailer Park Site Plan (87-46).

Mr. Soukup: I'll second that motion.

ROLL CALL:

Mr. McCarville	Aye
Mr. VanLeeuwen	Abstain
Mr. Soukup	Aye
Mr. Lander	Aye
Mr. Schiefer	Aye

Mr. McCarville: I make a motion that we approve the Site Plan for Silver Stream Village 87-46.

Mr. Soukup: I'll second that motion.

ROLL CALL:

Mr. McCarville	Aye
Mr. Pagano	Aye
Mr. VanLeeuwen	Abstain
Mr. Soukup	Aye
Mr. Lander	Aye
Mr. Schiefer	Aye



LOUIS HEIMBACH
County Executive

Department of Health

SALLY FAITH DORFMAN, M.D., M.S.H.S.A.
Commissioner of Health

June 27, 1989

Lanc & Tully, P.C.
POB 687
Goshen, NY 10924

Re:
Waterline Ext. & Sanitary
Sewer Ext. to serve
7 Lot Expansion - Silver Stream T.P.
T. New Windsor

Gentlemen:

We have reviewed the plans dated June 20, 1989 for the above mentioned projects. As the changes are minor and do not affect the water and sewer design there is no need for re-approval. The revised plans will serve as an addendum to the previously approved plans dated May 4, 1989.

Very truly yours,

Greg A. Moore

Greg A. Moore, P.E.
Sr. Public Health Engineer

GAM/aje

cc: Applicant
T. New Windsor
File

AS OF: 06/21/89

PAGE: 1

CHRONOLOGICAL JOB STATUS REPORT

JOB: 87-56 NEW WINDSOR PLANNING BOARD (Chargeable to Applicant)

CLIENT: NEWWIN - TOWN OF NEW WINDSOR

TASK: 87- 46

TASK-NO	REC	--DATE--	TRAN	EMPL	ACT DESCRIPTION-----	RATE	HRS.	TIME	EXP.	BILLED	BALANCE
87-46	12867	06/21/88	TIME	MJE	MC SILVER STREAM	60.00	0.30	18.00			
87-46	13011	06/22/88	TIME	NJE	CL SILVER STREAM MOBILE	19.00	0.50	9.50			
87-46	14874	08/01/88	TIME	MJE	MC SILVER STREAM	60.00	0.50	30.00			
87-46	14898	08/03/88	TIME	MJE	MC SILVER STREAM	60.00	0.20	12.00			
87-46	16797	09/07/88	TIME	MJE	MC SILVER STREAM	60.00	0.20	12.00			
87-46	16930	09/12/88	TIME	MJE	MC SILVER STREAM	60.00	0.50	30.00			
87-46	17600	09/13/88	TIME	NJE	CL SILVER STREAM	19.00	0.50	9.50			
87-46	16940	09/14/88	TIME	MJE	MC SILVER STREAM	60.00	0.50	30.00			
								151.00			
37-46	20396	11/14/88			BILL Partial Billing					-105.00	
										-105.00	
87-46	34079	05/16/89	TIME	MJE	MC SILVER STREAM	60.00	0.30	18.00			
87-46	36317	06/12/89	TIME	MJE	MC SILVER STREAM	60.00	0.30	18.00			
87-46	36435	06/13/89	TIME	EJ	CL SILVER STREAM	19.00	0.30	9.50			
87-46	36318	06/14/89	TIME	MJE	MC SILVER STREAM	60.00	0.20	12.00			
37-46	36441	06/14/89	TIME	EJ	CL SILVER STREAM	19.00	0.30	9.70			
87-46	36486	06/20/89	TIME	MJE	MC ALSO INCLUDES 83-20	0.00	0.10	0.00			
					TASK TOTAL			214.20	0.00	-105.00	109.20
					GRAND TOTAL			214.20	0.00	-105.00	109.20

7/24/89 Total fees to
be billed to applicant

INTER OFFICE CORRESPONDENCE

TO: Town Planning Board

FROM: Town Fire Inspector

DATE: May 19, 1989

SUBJECT: Silver Stream Village Site Plan

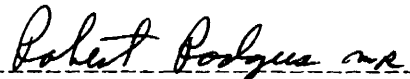
Planning Board Reference Number: PB - 87-46

Fire Prevention Reference Number: FPS-89-049

Previous Reference Number: FP-88-045

Per the workshop secession of 16 May 1989, a review of the above referenced subject site plan was completed, and this site plan is found acceptable.

Plan Dated: 28 April 1989



Robert Rodgers
Fire Inspector

CC: M.E.



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

45 QUASSAICK AVE. (ROUTE 9W)
NEW WINDSOR, NEW YORK 12550

TELEPHONE (914) 562-8640
PORT JERVIS (914) 856-5600

RICHARD D. MCGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.

Licensed in New York,
New Jersey and Pennsylvania

PLANNING BOARD WORK SESSION
RECORD OF APPEARANCE

TOWN OF NEW WINDSOR P/B # -
WORK SESSION DATE: 16 MAY 1989 APPLICANT RESUB.
REAPPEARANCE AT W/S REQUESTED: No REQUIRED: New Plans
PROJECT NAME: Silver Stream Expansion
COMPLETE APPLICATION ON FILE Yes NEW OLD
REPRESENTATIVE PRESENT: Le. Clark - ; Lane & Tully Rep.
TOWN REPS PRESENT: BLDG INSP. ✓
FIRE INSP. ✓
P/B ENGR. ✓
OTHER (Specify)

ITEMS TO BE ADDRESSED ON RESUBMITTAL:

- remove play area tib. reloc.
- need Bob Rodgers. *
- 8 new; 1 elim.
- adding 6' stockade fence.
- show 24 ft road.

(upon new plans
set up for agenda)

87-46

BUILDING INSPECTOR, P.B. ENGINEER,
WATER, SEWER, HIGHWAY REVIEW FORM:

The maps and plans for the Site Approval _____
Subdivision _____ as submitted by
McGee & Hauser for the building or subdivision of
Silver Stream Village has been
reviewed by me and is approved ✓
~~disapproved~~ _____.

~~If disapproved, please list reason.~~

There is no town water in this area
as yet -

HIGHWAY SUPERINTENDENT

Stan D. Div
WATER SUPERINTENDENT

SANITARY SUPERINTENDENT

DATE



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK

BUREAU OF FIRE PREVENTION

SITE PLAN APPROVAL

Silver Stream Village

The aforementioned site plan or map was reviewed by the Bureau of Fire Prevention at a meeting held on 21 July 1987.

☐ The site plan or map was approved by the Bureau of Fire Prevention.

☒ The site plan or map was disapproved by the Bureau of Fire Prevention for the following reason(s).

Request for better (readable) site plans

SIGNED:

Richard Rotaling
CHAIRMAN

PRESUBMISSION CONFERENCES

SILVER STREAM VILLAGE (87-46)

Mr. Lester Clark came before the Board with the maps of this proposal.

Mr. Clark: Basically I am not prepared to answer any quick engineering data on this proposal. We are requesting your conceptual consideration of possibly adding 7 more sites to the subdivision on this westerly portion. This drive, when we first came to improve the property in the old section this drive was installed at this point in order to eliminate the parking up front because it was a helter-skelter mess we mandated these 20 homes and put their parking on the rear and put a ten foot paved drive and ten foot gravel drive for parking and that is the way it remained. Each lot is 50 feet they park two cars here and this would be the ingress and egress strictly for parking. They still had frontage on the main road. When I propose to do with that drive is to increase it to 20 to 24 feet whatever you may want I think the regulations call for interior roads of 20 feet. I'd like it 22 feet. I'd provide for each of these

homes with two on-site parking places which some of them have already. This would seem to benefit the use of the existing older mobile homes. In this road and on this older section 50% of the units have been removed and put in and straightened out. These sites proposed are five thousand foot minimum they meet that criteria they meet the set back requirements and all the rear requirements in the mobile home zoning part of the code in order to preclude having a turn around proposed to eliminate this older home bring the road looped through the back to the main road which has some obviously benefits. So I am here really tonight so see if you have an objection to this concept.

Mr. Van Leeuwen: Are you going to put the homes in here?

Mr. Clark: Seven new mobile homes of the type that you see throughout the park some of them are double wide as indicated. When I make the submission I will have the definitive site plans on all the old sections. There is plenty of play area to meet the requirements of the additional homes.

Mr. Jones: The new road he is going to put in doesn't that have to be 34?

Mr. Clark: I'd make it 22 even 24 if you wanted.

Mr. Scheible: It would have to go to the fire prevention bureau.

Mr. Jones: He has been requiring 34 foot roads.

Mr. Clark: We are trying to provide more modest priced homes in the area.

Mr. Mc Carville: We have to take this and send it to the bureau of fire prevention.

Mr. Clark: This is just a presubmission just to see what you think otherwise I will make formal drawings.

Mr. Scheible: I'd like to take a consensus of the Board, do you feel the man is justified in going on with these plans?

Mr. Jones: Why not, he's done good work with everything he's done in the Town so far.

Mr. Reyns: No objection.

Mr. Mc Carville: No objection.

Mr. Lander: No problem.

Mr. Van Leeuwen: No problem.

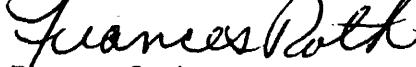
Mr. Scheible: And I have no problem with this.

Mr. Babcock: According to the mobile section what I read here is that all streets shall be 24 feet or more so I think that is what is going to have to happen when the fire bureau comes back with their recommendation and it goes on with parking on the street and so on that will be something you can discuss with them.

Mr. Clark: Thank you.

Being that there was no further business to come before the Board a motion was made to adjourn the September 23, 1987 meeting of the Town of New Windsor Planning Board by Mr. Van Leeuwen, seconded by Mr. Mc Carville and approved by the Board.

Respectfully Submitted by:

A handwritten signature in cursive script that reads "Frances Roth".

Frances Roth
Stenographer



SILVER STREAM VILLAGE

SIGNED:

CHAIRMAN

Planning Board
Town of New Windsor
555 Union Avenue
New Windsor, NY 12550

(This is a two-sided form)

Date Received _____
Meeting Date _____
Public Hearing _____
Action Date _____
Fees Paid _____

APPLICATION FOR SITE PLAN, LOT-LINE CHANGE
OR SUBDIVISION PLAN APPROVAL

1. Name of Project Silver Stream Village
2. Name of Applicant Silver Stream Inc Phone 564-5800
Address 614 Little Britain Rd. New Windsor, NY. 12550
(Street No. & Name) (Post Office) (State) (Zip)
3. Owner of Record Silver Stream, Inc Phone 564-5800
Address 614 Little Britain Rd. New Windsor, NY. 12550
(Street No. & Name) (Post Office) (State) (Zip)
4. Person Preparing Plan _____ Phone _____
Address _____
(Street No. & Name) (Post Office) (State) (Zip)
5. Attorney Jerome Johnson Phone 352-4200
Address 53 Burd St. New York, NY. 10960
(Street No. & Name) (Post Office) (State) (Zip)
6. Location: On the west side of Silver Stream Cr.
800 feet south
of Route 207
(Street) (Direction)
7. Acreage of Parcel _____ 8. Zoning District _____
9. Tax Map Designation: Section 32 Block 2 Lot 13
10. This application is for addition of seven mobile home sites
11. Has the Zoning Board of Appeals granted any variance or a special permit concerning this property? no

(OWNER - EXHIBIT) 564-5800

If so, list Case No. and Name _____

12. List all contiguous holdings in the same ownership

Section none Block _____ Lot(s) _____

Attached hereto is an affidavit of ownership indicating the dates the respective holdings of land were acquired, together with the liber and page of each conveyance into the present owner as recorded in the Orange County Clerk's Office. This affidavit shall indicate the legal owner of the property, the contract owner of the property and the date the contract of sale was executed.

IN THE EVENT OF CORPORATE OWNERSHIP: A list of all directors, officers and stockholders of each corporation owning more than five percent (5%) of any class of stock must be attached.

OWNER'S ENDORSEMENT

(Completion required ONLY if applicable)

COUNTY OF ORANGE

SS. _____

STATE OF NEW YORK

SILVER STREAM, INC.

Lester A. Clark, Pres. being duly sworn, deposes and says that he resides at 614 Little Britain Rd. New Windsor N.Y. in the County of Orange and State of New York and that he is (the owner in fee) of President (Official Title)

of the Corporation which is the Owner in fee of the premises described in the foregoing application and that he has authorized to make the foregoing application for Special Use Approval as described herein.

I HEREBY DEPOSE AND SAY THAT ALL THE ABOVE STATEMENTS AND INFORMATION, AND ALL STATEMENTS AND INFORMATION CONTAINED IN THE SUPPORTING DOCUMENTS AND DRAWINGS ATTACHED HERETO ARE TRUE.

Sworn before me this

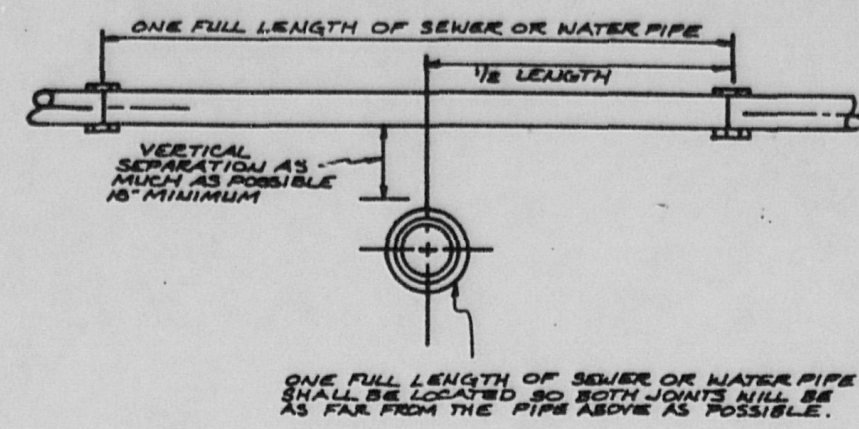
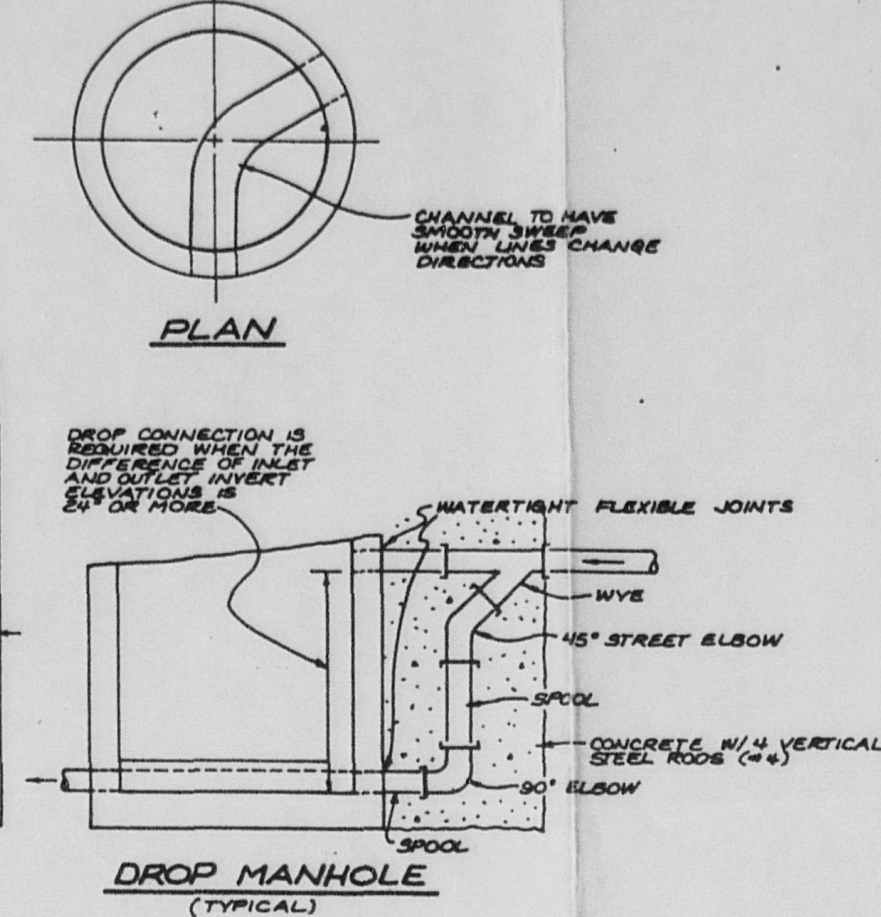
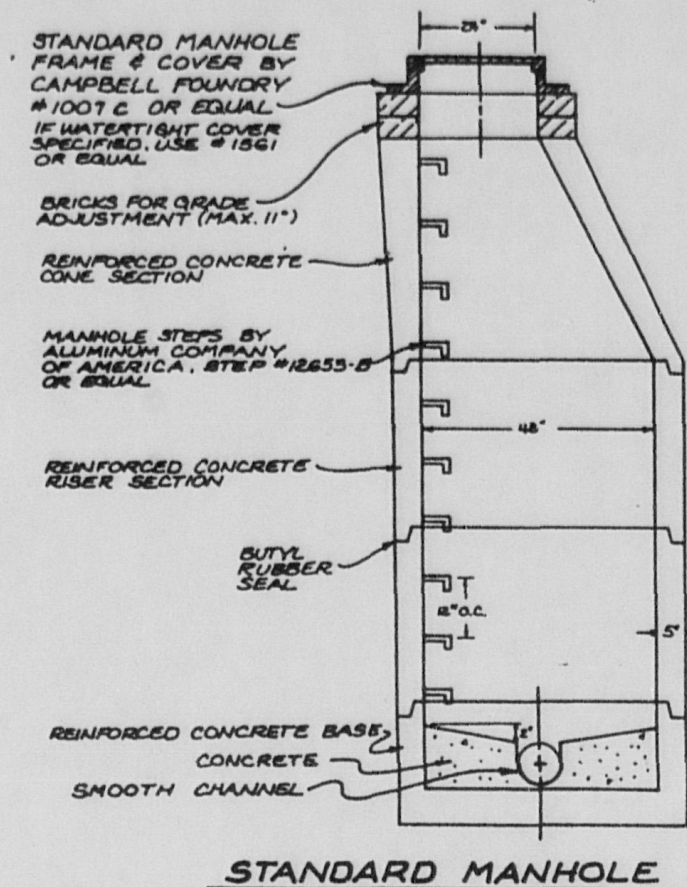
17th day of June 1988

[Signature]
(Owner's Signature)

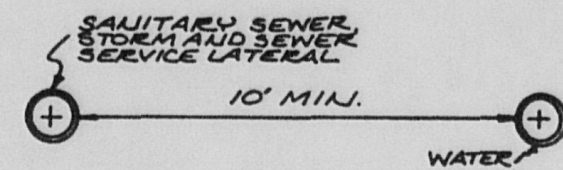
[Signature]
(Applicant's Signature)

Assoc. Sls. Assn. 2
(Title)

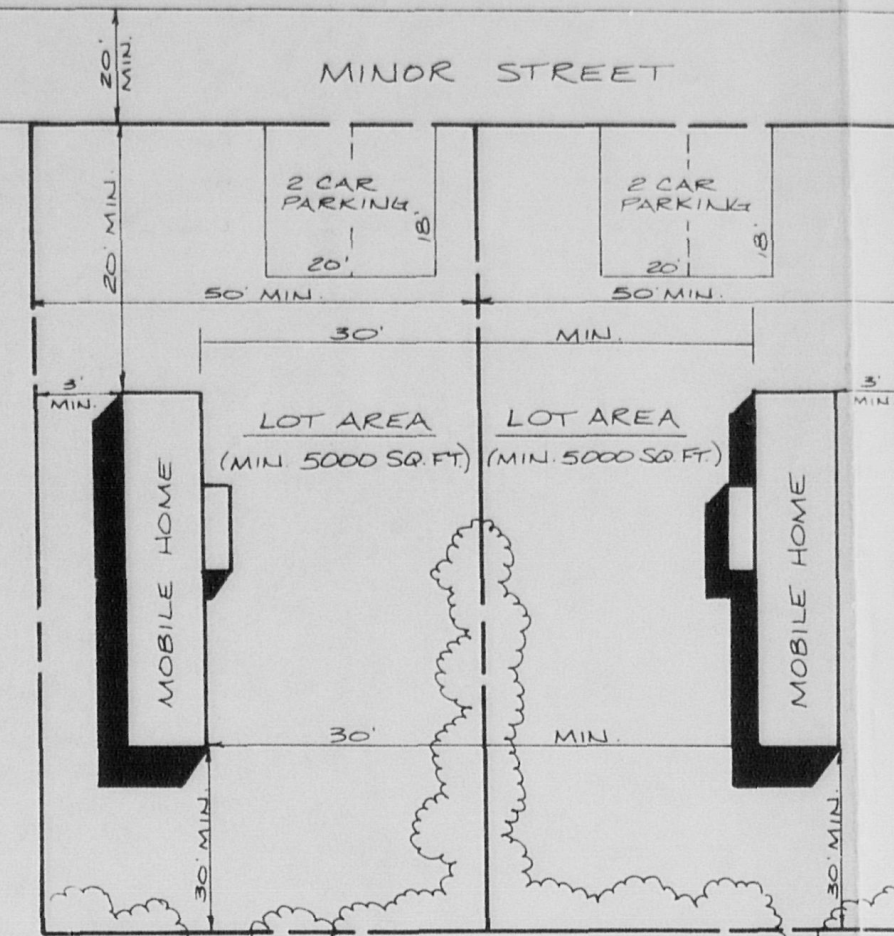
CONSTANCE M. BOLTON
Notary Public, State of New York
Qualified in Rockland County
Commission Expires June 2, 1991



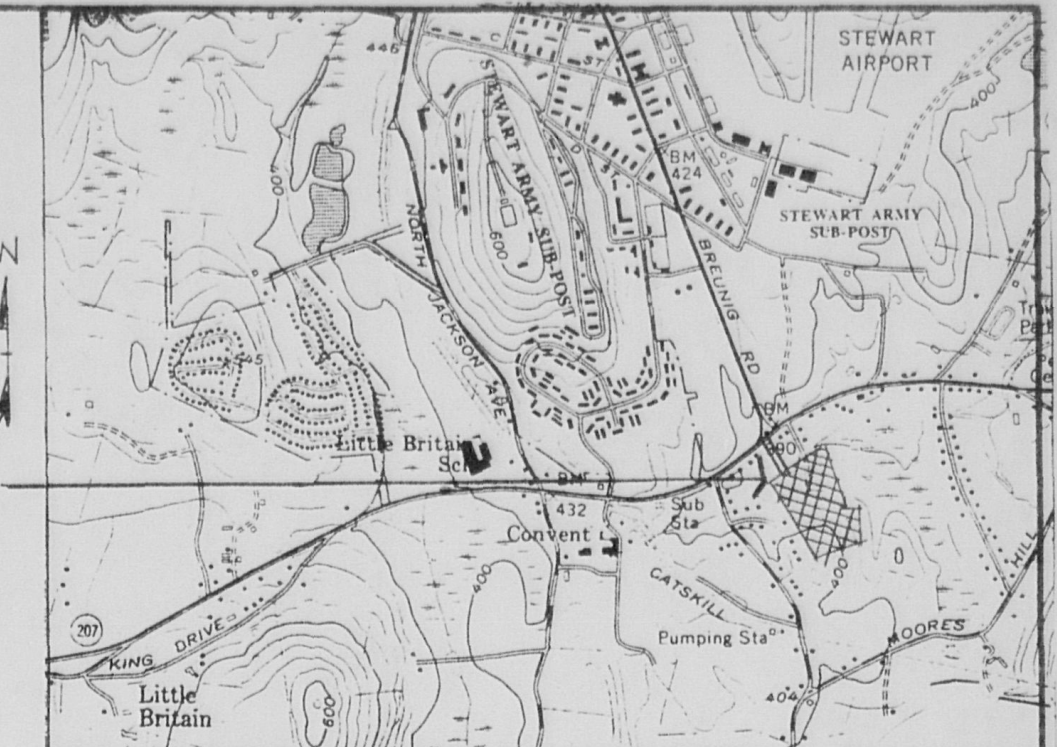
WATER & SEWER CROSSING DETAIL
NOT TO SCALE



WATER & SEWER
HORIZONTAL SEPARATION
NOT TO SCALE



TYPICAL LOT LAYOUT



LOCATION PLAN
U.S.G.S. CORNWALL QUADRANGLE
SCALE 1"=2000'

NOTES:

1. REF: A MAP ENTITLED "UTILITY PLAN SILVER STREAM VILLAGE SECTION 2", RICHARD BARGER LS + P.E. WAFFINGERS FALLS, N.Y. JAN 27 1983
2. BOUNDARY INFORMATION SHOWN BASED ON ACTUAL FIELD SURVEY BY LANC & TULLY, P.C., AND COMPLETED ON JULY 19, 1988.
3. TOPOGRAPHY SHOWN FROM ACTUAL FIELD LOCATION PREPARED BY LANC & TULLY, P.C. ON DEC 15, 1987
4. NEW WINDSOR SEWER DISTRICT #1-15.
5. EXISTING SUBSURFACE UTILITIES ARE APPROXIMATE LOCATIONS ONLY. SEE NOTE #1
6. MOBILE HOME PARK SERVED BY TWO COMMUNITY WELLS, PRIVATE OWNERSHIP LOCATED WITHIN PARK.
7. SEWER LATERAL OF LOT 1 TO CROSS LOT 2 TO MAINTAIN 100' SEPARATION FROM COMMUNITY WATER SUPPLY WELL.
8. DRAINAGE CHANNEL TO BE DIVERTED TO REAR OF LOTS 1-5, AS SHOWN.
9. NEW PAVED ROAD 24'-0" WIDTH, SIGNED "NO PARKING IN STREET".



ZONING REQUIREMENTS: R-4A

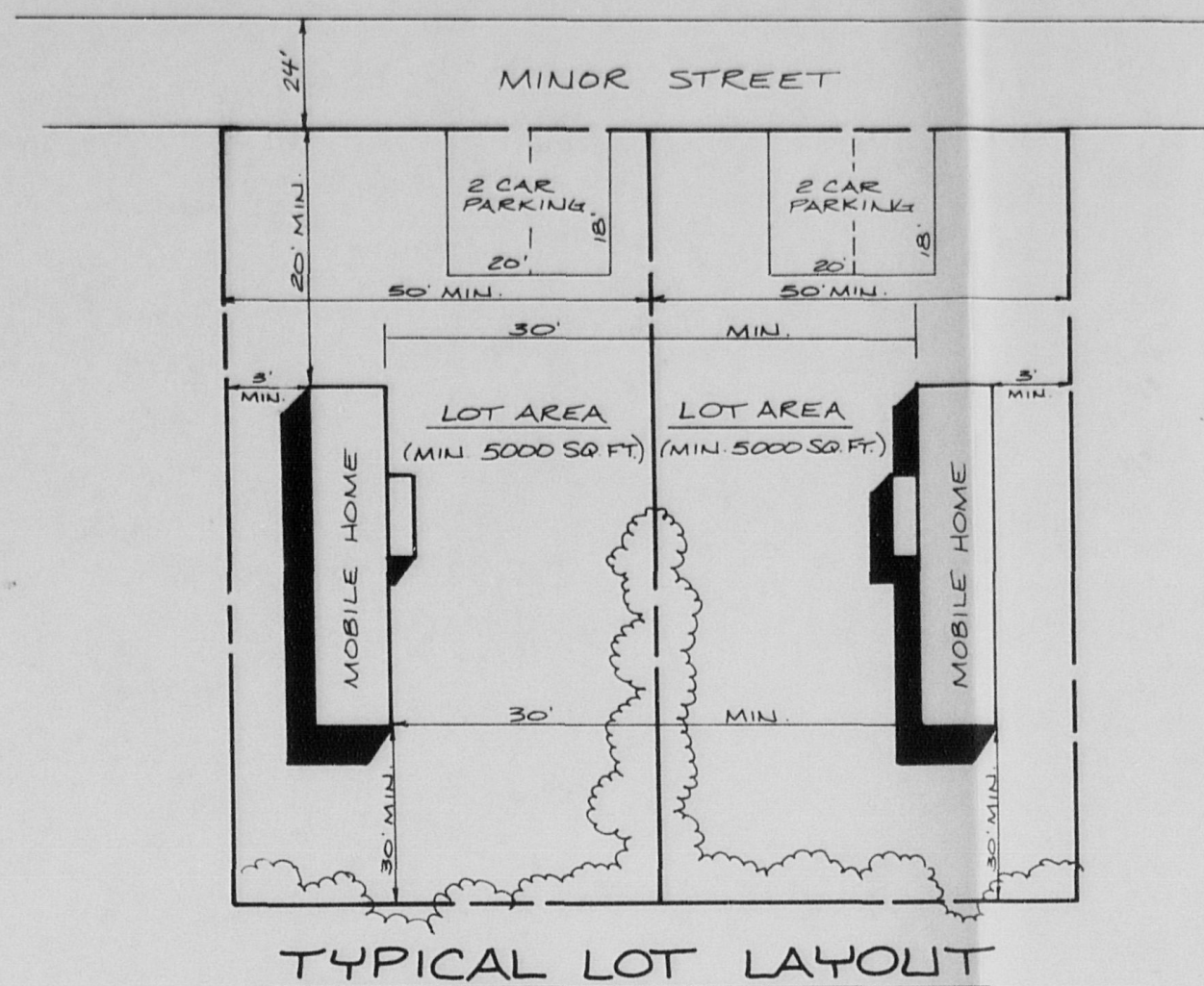
- MINIMUM LOT SIZE 5000 SQ. FT.
- MINIMUM LOT WIDTH 50 FT.
- MINIMUM FRONT YARD 20 FT.
- MINIMUM DISTANCE BETWEEN INDIVIDUAL HOMES 30 FT.
- MINIMUM SETBACK OF HOMES FROM PROPERTY LINE 30 FT.
- MINIMUM ON-SITE PARKING/LOT 2
- MINIMUM ROAD WIDTH (MINOR ST.) 20 FT.
- MAXIMUM OVERALL DENSITY 4.6 TRAILER LOTS/AC

RECORD OWNER:
SILVER STREAM INC.
614 LITTLE BRITAIN RD.
NEW WINDSOR, N.Y. 12550
TAX PARCEL # 32-2-13

LANC & TULLY ENGINEERING AND SURVEYING, P.C.		P.O. Box 687, Rt 207 Goshen, N.Y. 10924 (914) 294-3700	P.O. Box 373 - Rt 55 La Grangeville, N.Y. 12540 (914) 473-3730
SITE PLAN FOR 8-LOT EXPANSION OF SILVER STREAM VILLAGE MOBILE HOME PARK TOWN OF NEW WINDSOR N.Y.		Date 3/23/88 Revisions 7/13/88 8/15/88 9/14/88	Sheet No 1 OF 1 Drawing No 87-196 #88-20
Drawn By M. GRAU	Checked By	Scale 1"=50'	Tax Map No

SITE PLAN APPROVAL RAISED
BY TOWN OF NEW WINDSOR PLANNING BOARD
ON Aug 24, 1989
BY Daniel C. McCarville
DANIEL C. MCCARVILLE
SECRETARY

TOWN OF NEW WINDSOR APPROVAL BOX



NOTES:

1. ZONING DISTRICT: R-4A
2. TAX MAP NUMBER: 32-2-13
3. REFERENCE: A MAP ENTITLED "UTILITY PLAN SILVER STREAM VILLAGE SECTION 2", RICHARD BARGER L.S. AND PE WAPPINGERS FALLS, N.Y. JAN. 27, 1983
4. BOUNDARY INFORMATION SHOWN BASED ON ACTUAL FIELD SURVEY BY LANC AND TULLY, P.C., AND COMPLETED ON JULY 19, 1988
5. TOPOGRAPHY SHOWN TAKEN FROM ACTUAL FIELD LOCATION PREPARED BY LANC AND TULLY, P.C. ON SEPTEMBER, 20 1988
6. SUBSURFACE STRUCTURES AND UTILITIES WHICH WERE NOT VISIBLE AT THE TIME OF SURVEY HAVE NOT BEEN SHOWN.
7. COPIES MADE FROM THE ORIGINAL OF THIS SURVEY NOT MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S STAMP OR HIS EMBOSSED SEAL SHALL NOT BE CONSIDERED VALID TRUE COPIES
8. UNAUTHORIZED ALTERATION OR ADDITION TO THIS MAP IS A VIOLATION OF SECTION 7209-2 OF THE NEW YORK STATE EDUCATION LAW
9. "NO PARKING" SIGNS SHALL BE PLACED ALONG PROPOSED POST ROAD
10. WATER CONNECTORS WHICH PROVIDE WATER SERVICE TO MOBILE HOMES SHALL BE WOODFORD THERMALINE 4 1/2 FT. BURY, WITH 15 WATT PORTABLE INSERT HEATER, BONDED POLYURETHANE INSULATION, SANITARY TIGHT-LINE DESIGN.
11. TEST PIT HOLES SHALL BE PERFORMED PRIOR TO THE CONSTRUCTION OF WATER LINES TO DETERMINE THE ACTUAL LOCATIONS AND ELEVATIONS OF THE EXISTING SANITARY SEWER LINES, SO THAT PROPER CLEARANCE BETWEEN SEWER LINES AND WATER LINES CROSSING CAN BE MAINTAINED.
12. GATE VALVE SHALL BE MODEL H-15154 OF MUELLER OR EQUAL.

ZONING REQUIREMENTS: R-4A

MINIMUM LOT SIZE	5000 SQ. FT.
MINIMUM LOT WIDTH	50 FT.
MINIMUM FRONT YARD	20 FT.
MINIMUM DISTANCE BETWEEN INDIVIDUAL HOMES	30 FT.
MINIMUM SETBACK OF HOMES FROM PROPERTY LINE	30 FT.
MINIMUM ON-SITE PARKING/LOT	2
MINIMUM ROAD WIDTH (MINOR ST.)	20 FT.
MAXIMUM OVERALL DENSITY	4.6 TRAILER LOTS/AC.

SITE PLAN

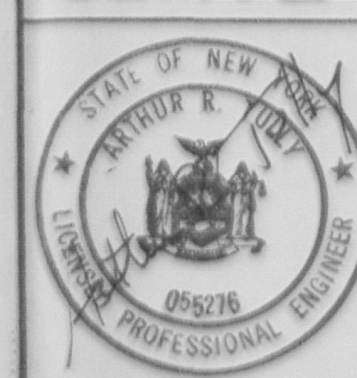
COPYRIGHT 1989 LANC & TULLY, P.C.

LANC & TULLY
ENGINEERING AND SURVEYING, P.C.

P.O. Box 687, Rt. 207
Goshen, N.Y. 10924
(914) 294-3700

P.O. Box 373 - Rt. 55
La Grangeville, N.Y. 12540
(914) 473-3730

WATERLINE EXTENSION TO
SERVE 7-LOT EXPANSION



SILVER STREAM VILLAGE

MOBILE HOME PARK
TOWN OF NEW WINDSOR
ORANGE COUNTY, NEW YORK

Drawn By: M. GRAL Checked By: Scale: 1" = 50' Tax Map No: 32-2-13

Date: 5/23/88
Revision: 10/17/88
TOPO UPDATE
APRIL 5, 1989
APRIL 15, 1989
MAY 16, 1989
JUNE 20, 1989
Sheet No: 1 OF 3
Drawing No: 67-196

CERTIFICATION:

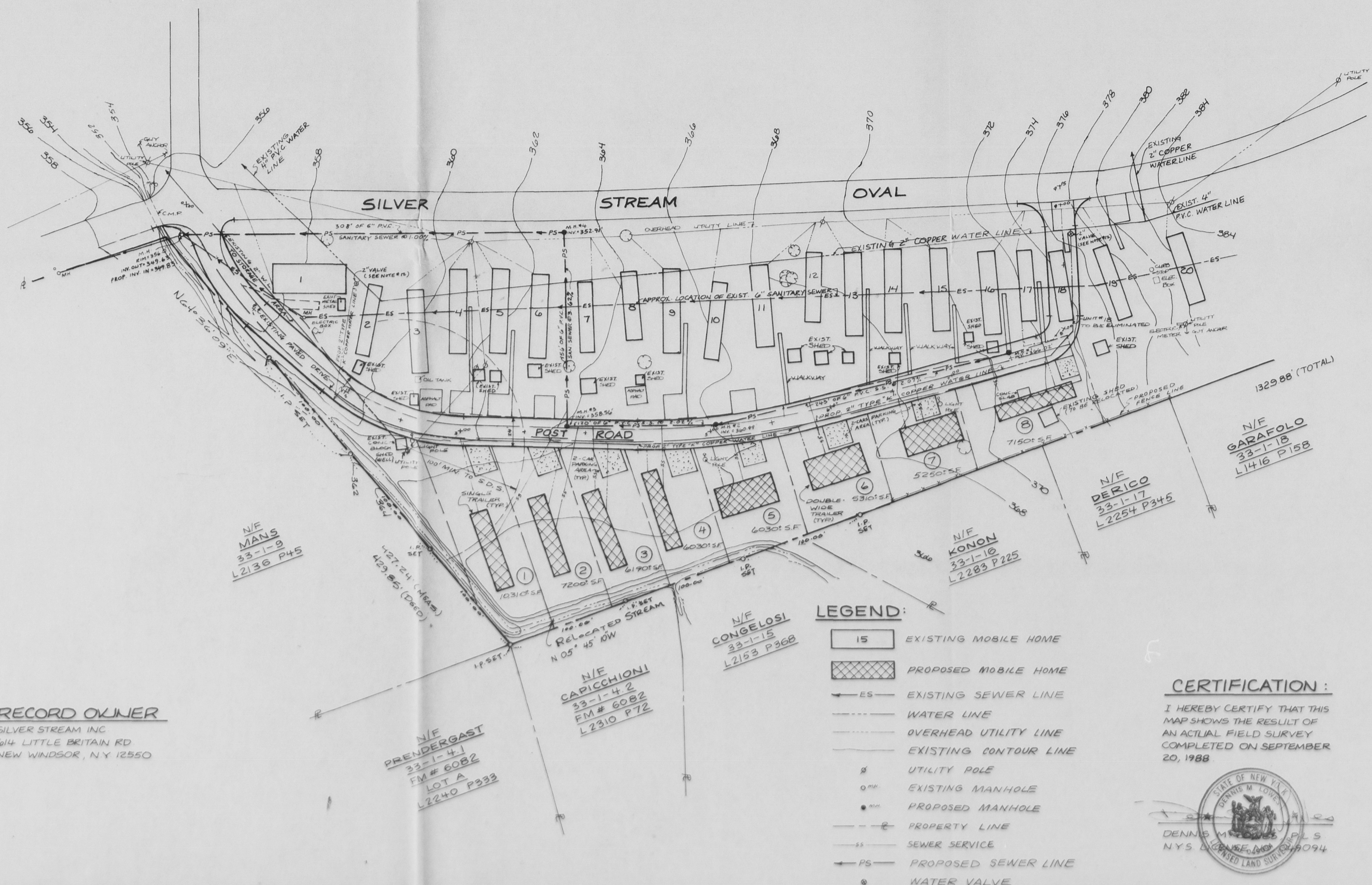
I HEREBY CERTIFY THAT THIS MAP SHOWS THE RESULT OF AN ACTUAL FIELD SURVEY COMPLETED ON SEPTEMBER 20, 1988



DENNIS M. LANCY
NYS LICENSED LAND SURVEYOR

LEGEND:

- 15 EXISTING MOBILE HOME
- PROPOSED MOBILE HOME
- ES EXISTING SEWER LINE
- WATER LINE
- OVERHEAD UTILITY LINE
- EXISTING CONTOUR LINE
- UTILITY POLE
- EXISTING MANHOLE
- PROPOSED MANHOLE
- PROPERTY LINE
- SEWER SERVICE
- PS PROPOSED SEWER LINE
- WATER VALVE



RECORD OWNER

SILVER STREAM INC
614 LITTLE BRITAIN RD
NEW WINDSOR, N.Y. 12550

N/F
PRENDERGAST
33-1-4-1
FM# 6082
LOT A
L2240 P333

N/F
CAPICCHIONI
33-1-4-2
FM# 6082
L2310 P72

N/F
CONGELOSI
33-1-15
L2153 P368

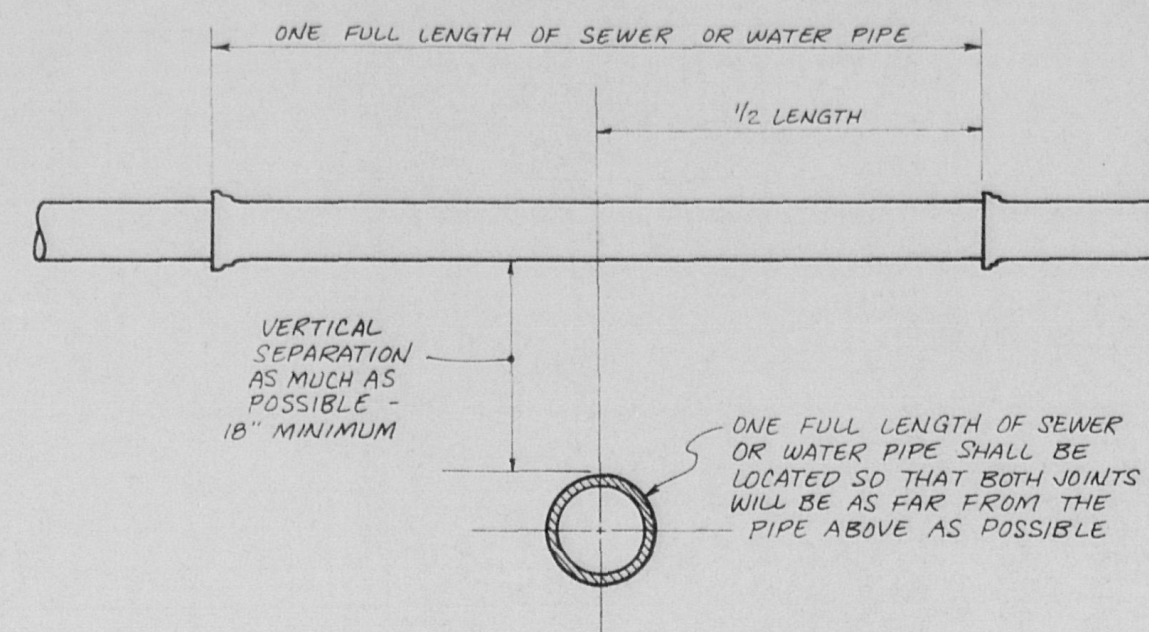
N/F
KONON
33-1-10
L2283 P225

N/F
DERICO
33-1-17
L2254 P345

N/F
SARAFOLLO
33-1-18
L1416 P158

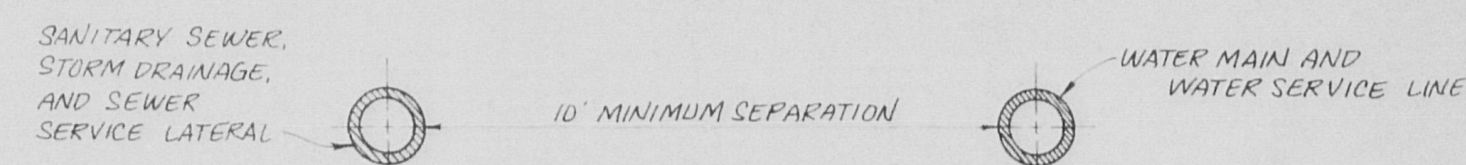
N/F
MANS
33-1-9
L2136 P45

TOWN OF NEW WINDSOR APPROVAL BOX



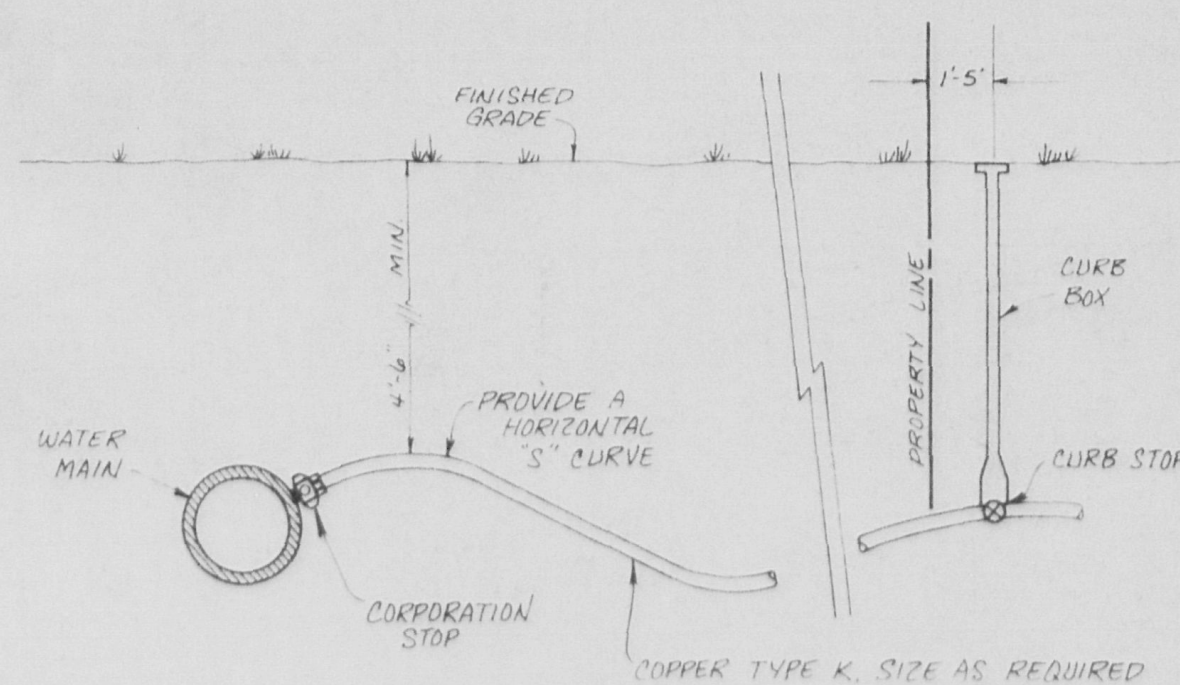
WATER & SEWER CROSSING DETAIL

NOT TO SCALE



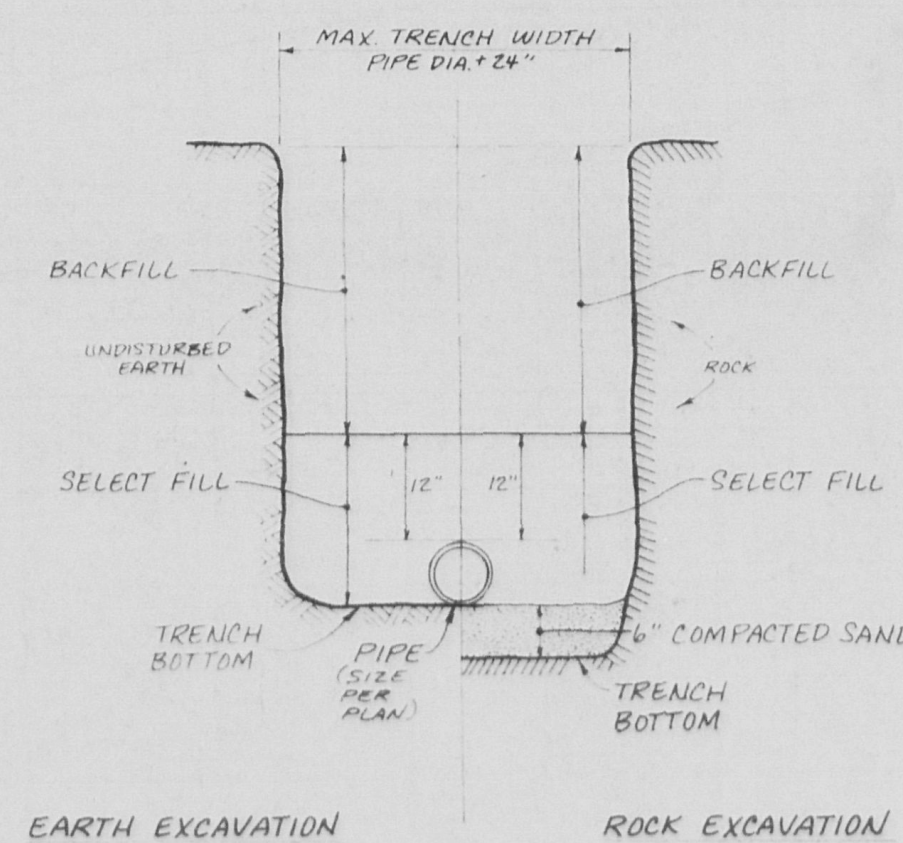
WATER & SEWER HORIZONTAL SEPARATION

NOT TO SCALE



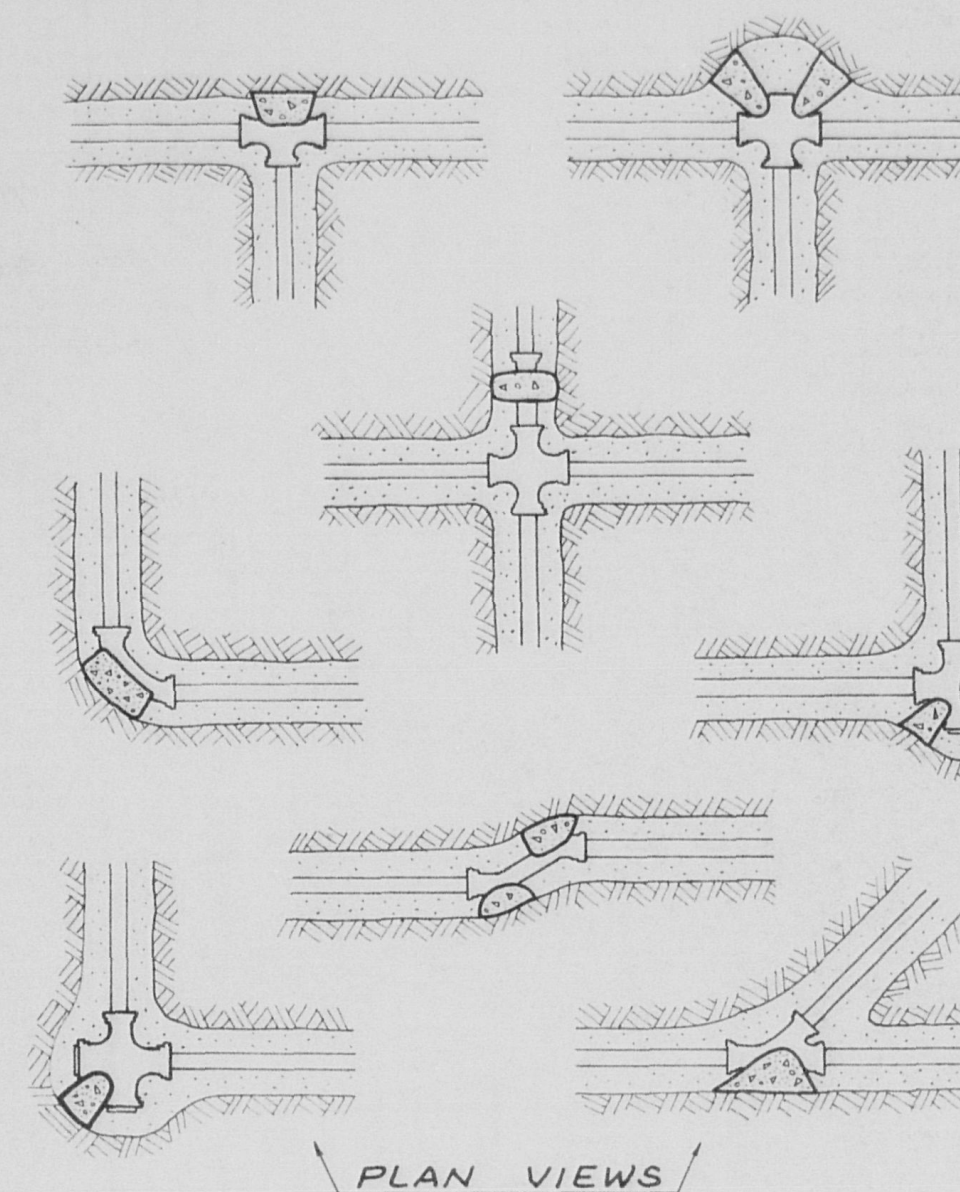
DETAIL - WATER SERVICE

NOT TO SCALE

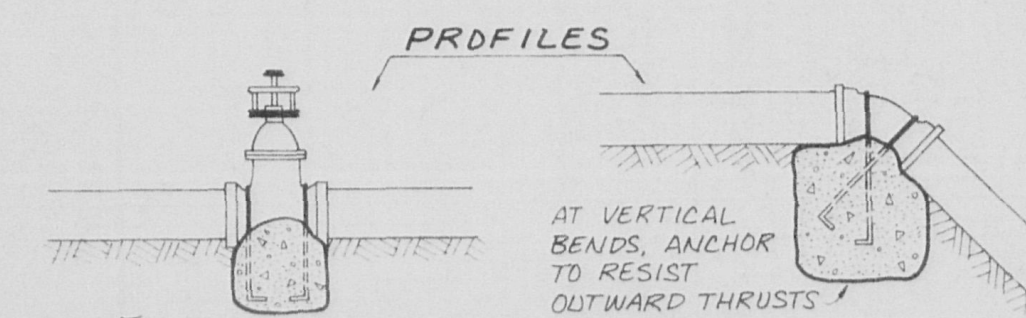


TRENCH CROSS-SECTION

NOT TO SCALE



PLAN VIEWS



PROFILES

NOTE: KEEP NUTS & BOLTS FREE OF CONCRETE THROUGH THE USE OF PLASTIC COVERS.

THRUST BLOCK DETAIL

NOT TO SCALE

THRUST BLOCK SIZING TABLE

BEARING AREA OF THRUST BLOCK IN SQUARE FEET					
FITTING (8" PIPE SIZE)	THRUST * (POUNDS)	HARD SHALE	SAND & GRAVEL	SAND	SOFT CLAY
TEES & DEAD ENDS	3,870	1	3.5	5	10
90° BEND	13,950	1.5	5	7	14
45° BEND	7,560	1	2.5	4	8
22½° BEND	3,825	1	1.5	2	4

* THRUST AT 150 P.S.I. OF WATER PRESSURE

COPYRIGHT 1989 LANC & TULLY, P.C.

LANC & TULLY
ENGINEERING AND SURVEYING, P.C.

P.O. Box 687, Rt. 207
Goshen, N.Y. 10924
(914) 294-3700

P.O. Box 373 - Rt. 55
Lo Grangeville, N.Y. 12540
(914) 472-3730

**WATERLINE EXTENSION TO
SERVE 7-LOT EXPANSION**

Date: **FEBRUARY 8, 1989**
Revisions:
APRIL 5, 1989
APRIL 28, 1989
JUNE 20, 1989



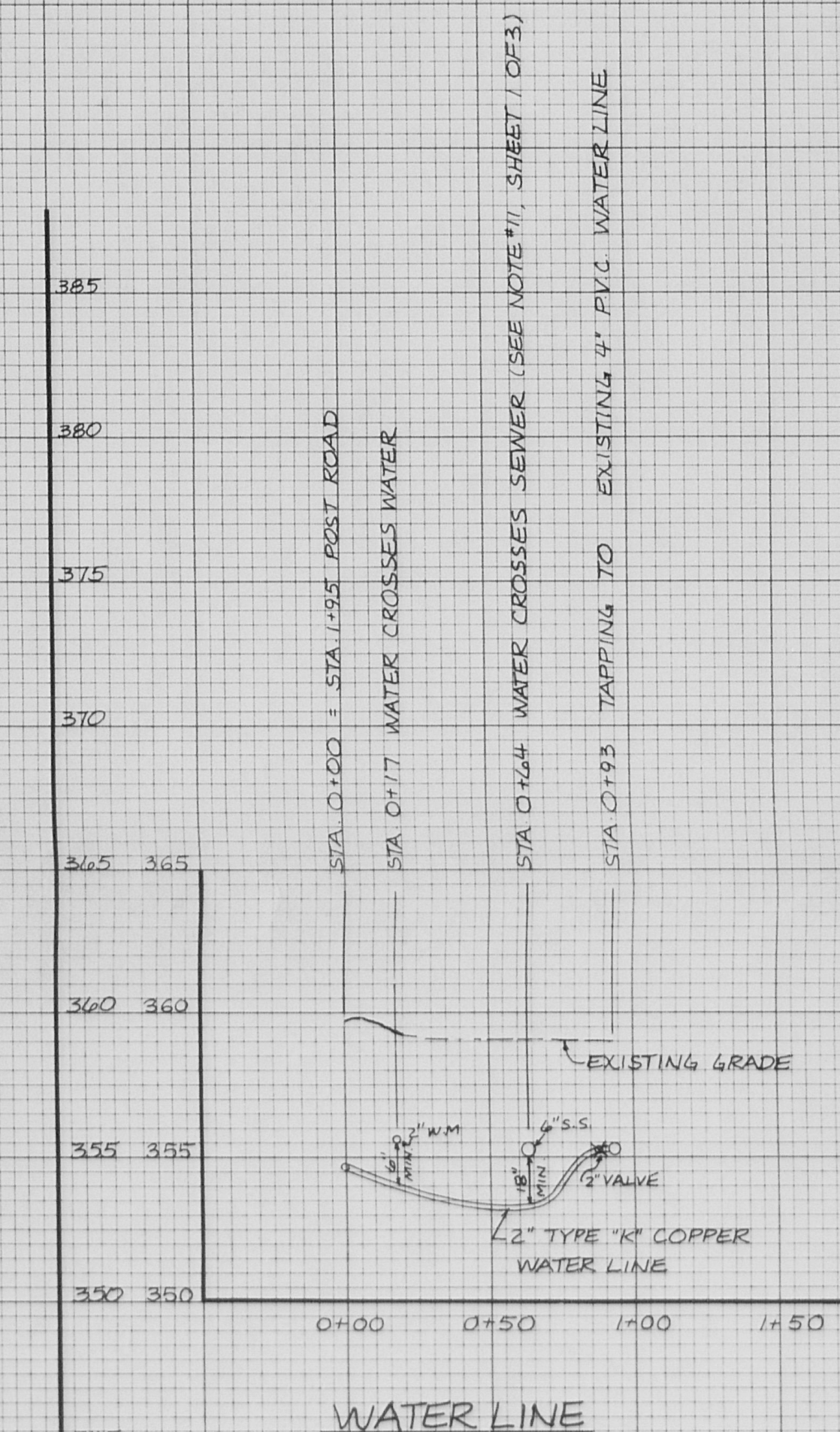
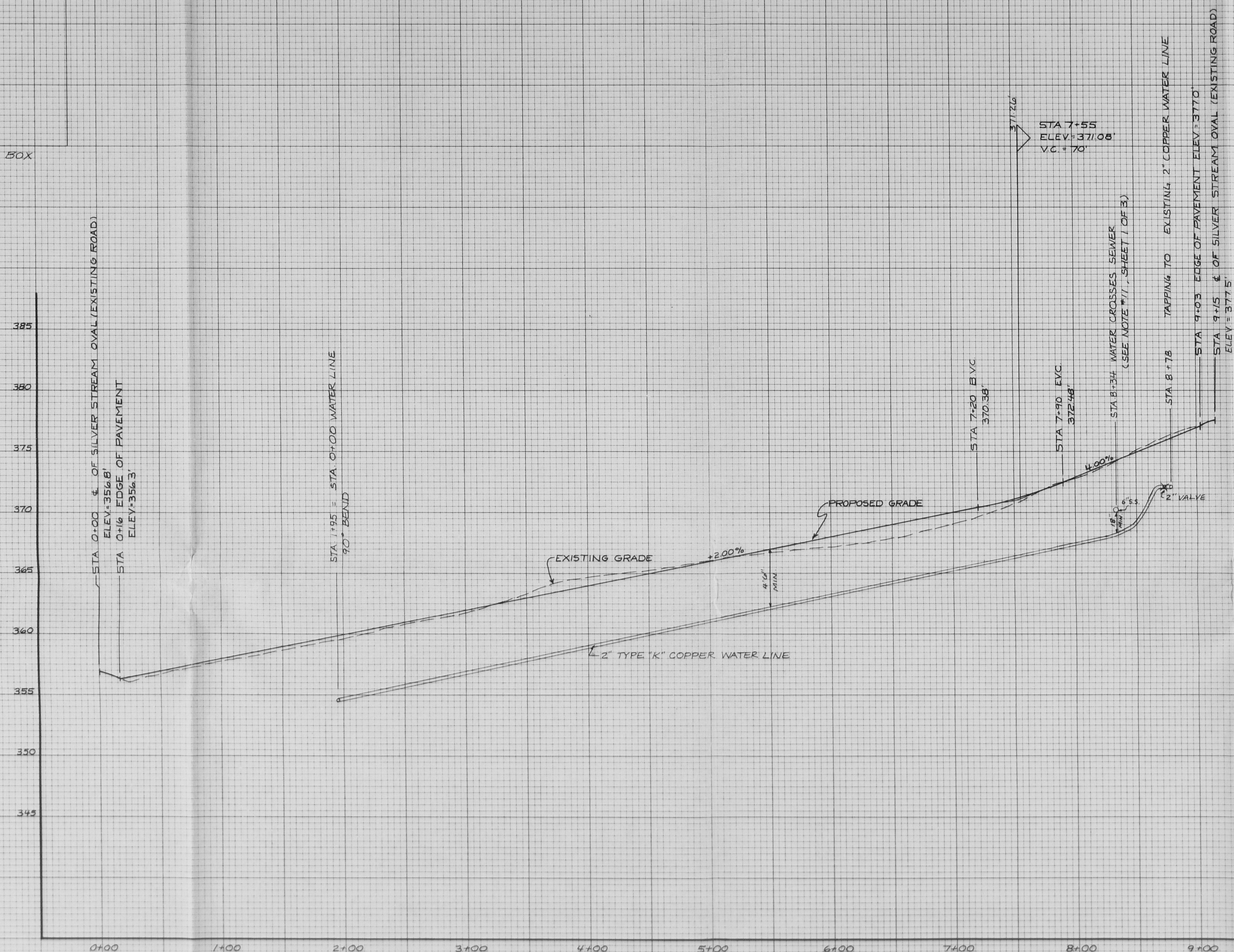
**SILVER STREAM
VILLAGE**
MOBILE HOME PARK
TOWN OF NEW WINDSOR
ORANGE COUNTY, NEW YORK

Sheet No:
2 OF 3

Drawn By: **L. Mosher** Checked By: **AS SHOWN** Scale: **N/A** Date: **87-136**

ORANGE COUNTY DEPARTMENT OF HEALTH APPROVAL BOX

TOWN OF NEW WINDSOR APPROVAL BOX



COPYRIGHT 1989 LANC & TULLY, P.C.

POST ROAD
SCALE HORIZ. 1"=50'
VERT. 1"=5'

LANC & TULLY ENGINEERING AND SURVEYING, P.C.		P.O. Box 687, Rt. 207 Goshen, N.Y. 10924 (914) 294-3700	P.O. Box 373, Rt. 55 La Grangeville, N.Y. 12540 (914) 473-3730
WATERLINE PROFILES		Date: APRIL 5, 1989	Revisions: APRIL 28, 1989 JUNE 20, 1989
		SILVER STREAM VILLAGE MOBILE HOME PARK TOWN OF NEW WINDSOR ORANGE COUNTY, NEW YORK	
Drawn By: B. Steynor	Checked By: AS SHOWN	Scale: AS SHOWN	Map No: N/A
Sheet No: 3 OF 3		Drawing No: 87-196	